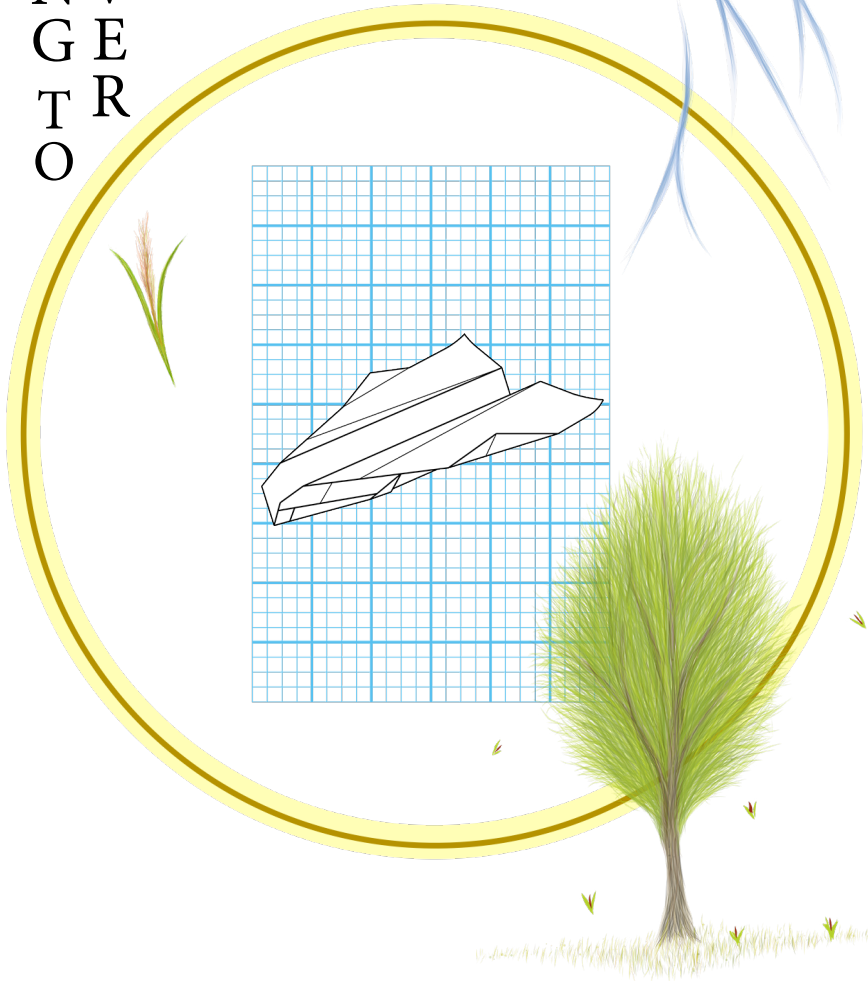
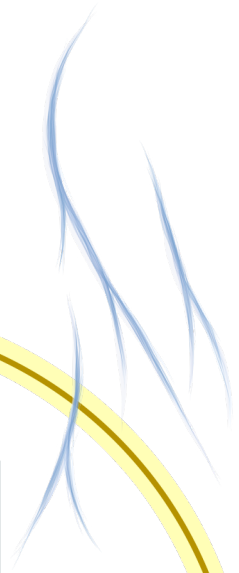


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*The Joy, Adventure, and Wisdom
of Paper Planes*

DWScott

*To my wonderful wife and precious children
who made it all possible and worthwhile.*

*To each who put up with me
over the years.*

*Thank you!
You helped me grow.
I hope the best for you always.*

RISING
TO
FOREVER

I wished to make a paper plane
that never fell to the ground.
It is surprising
how long it took me to understand
the limits of my ability
and the relentless rule of physics.
What went up always came down.

However, though always falling back to earth,
I have learned many things:
how to make planes
that can sometimes catch the wind
and fly far enough to go out of sight,
how to make many plane designs
and different ways to enjoy them
how the makings and doings
help me grow
in both understanding
and how to understand.

This book presents the planes
the how-to's of making and flying
along with ideas for playful activities.
It also explores the lessons
of how a simple paper plane
reflects the cosmic all
from the nearest close to the farthest away.

I hope you find something here
to help you soar
and that you can forgive me
if I sometimes seem to wander.

Many Paths

Given the breadth of topics
this book has been organized
so it is easier for readers
to follow their interests.

Most pages have a heading (e.g. “Many Paths”).
These are color coded.

Black is for concrete “how to”.

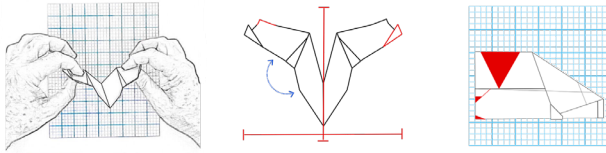
Blue is for abstract “things to consider”.

Red is for “important do not miss”.

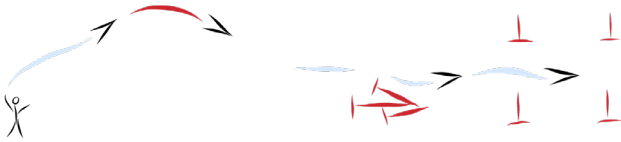
The first two pages of every chapter
consider the greater context.

These have blue headings.

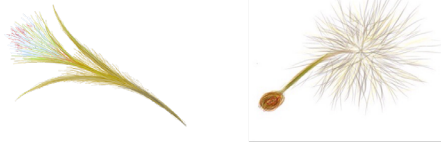
There are “how to” diagrams and illustrations.



There are illustrations of activities.



There are drawings about the page topic.



There are more abstract expressions of the content.



Cosmic Calligraphy

01 Introduction

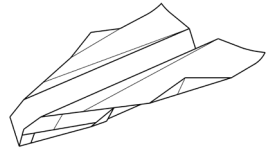
- .01 The seed*
- .02 Three Trees*
- .03 Fruitful Tree*
- .05 Changing Seed*
- .07 Growing Sprout*
- .09 Wonderful Struggle*

02 Getting Ready

- .01 Formed to Ascend*
- .02 A Simple Task*
- .03 Guiding and Quieting*
- .04 Work Space and Paper*
- .05 Folding*
- .06 Tearing*

03 The Sparrow

- .01 Emerging*
- .02 Perseverance*
- .03 Sparrow Design Key*
- .05 Sparrow Design*



04 Naming

- .01 Cosmic Vessels*
- .02 Atoms*
- .03 Plane Motion*
- .04 Plane Qualities*
- .05 Flight Phases*
- .06 Flight Aspects*

- 05 Flying
 - .01 Casting*
 - .02 Harvest*
 - .03 Trim*
 - .04 Flight Control*
 - .05 The Launch*
 - .06 Flight Plan*
 - .07 Flying*
 - .08 Safety*

- 06 Designing
 - .01 Food*
 - .02 Further*
 - .03 About Cutting and Folding*
 - .05 Cutting*
 - .06 Folding*
 - .07 Decorating*
 - .08 Design Seeds*
 - .11 Fulfilled and Complete*

- 07 Activities
 - .01 Wonder*
 - .02 Adventure*
 - .03 Free Flight*
 - .04 About Focused Flight*
 - .05 Acrobatics*
 - .06 Accuracy*
 - .07 Distance*
 - .08 Duration*
 - .09 Flight Log*
 - .10 Flight Log Example*
 - .11 Plane Personality*
 - .12 Personality Characteristics*
 - .13 Personality Example*
 - .14 Appearance and Naming*

. . . Continued on the next page

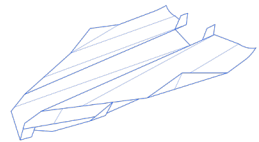
- 07 Activities . . . *continued*
 - .15 Adventure*
 - .16 Adventure Example*
 - .17 Gaming*
 - .18 Flight Competition - Distance and Duration*
 - .19 Flight Competition - Accuracy*
 - .20 Flight Competition - Accuracy Examples*
 - .21 Flight Competition - Acrobatics*
 - .22 Flight Competition - Acrobatics Examples*
 - .23 Course Navigation*
 - .24 Course Navigation Examples*
 - .25 Battle - Dogfight*
 - .26 Battle - Prizefight*
 - .27 Ultimate Adventure*
 - .28 Ultimate Adventure Example*
 - .29 Adventure Story*
 - .31 Prism Blocks*
 - .33 Prism Blocks Tall and Slender*
 - .34 Prism Blocks Short and Stout*

08 Making Keeping Releasing

- .01 Vast Moments*
- .02 Humble Best*
- .03 Making*
- .04 Making Example*
- .05 Keeping*
- .07 Releasing*

09 The Shooting Star

- .01 Transcending*
- .02 Awake*
- .03 Shooting Star Features*
- .04 Shooting Star Design Key*
- .05 Shooting Star Design*



10 Air Earth Launch Glide

- .01 Cosmic Churning*
- .02 Gaming the Wind*
- .03 Sun Earth Air*
- .05 Launch*
- .07 Launch Principles*
- .08 Throwing*
- .09 Catapult*
- .11 Goals and Methods*
- .13 Glide*

11 Principles

- .01 Path Finding*
- .02 Roots*
- .03 Humble*
- .04 Humble*
- .05 Peaceful*
- .06 Peaceful*
- .07 Aware*
- .08 Aware*
- .09 The Seeing Mind*
- .10 The Common Mind*

12 The Nova

- .01 Eternity Shore*
- .02 Final Lesson*
- .03 Even Before*
- .04 One and Many*
- .05 Was Is Might Be*
- .06 Free and Sure*
- .07 Wheat and Chaff*
- .08 Hope in the Forest*
- .09 A Final Sigh*



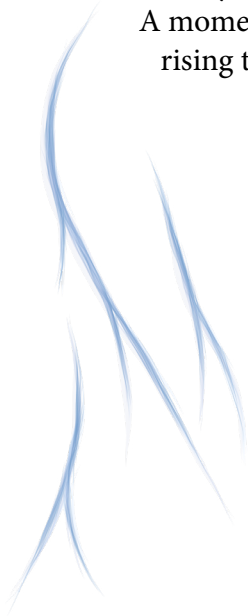


01 Introduction



There is a seed
traveling the stars.
It holds the spark
igniting the eyes.
Falling to the earth
burrowing into the heart
it sprouts a blazing tree.
Its branches reach to heaven
yearning to touch home.

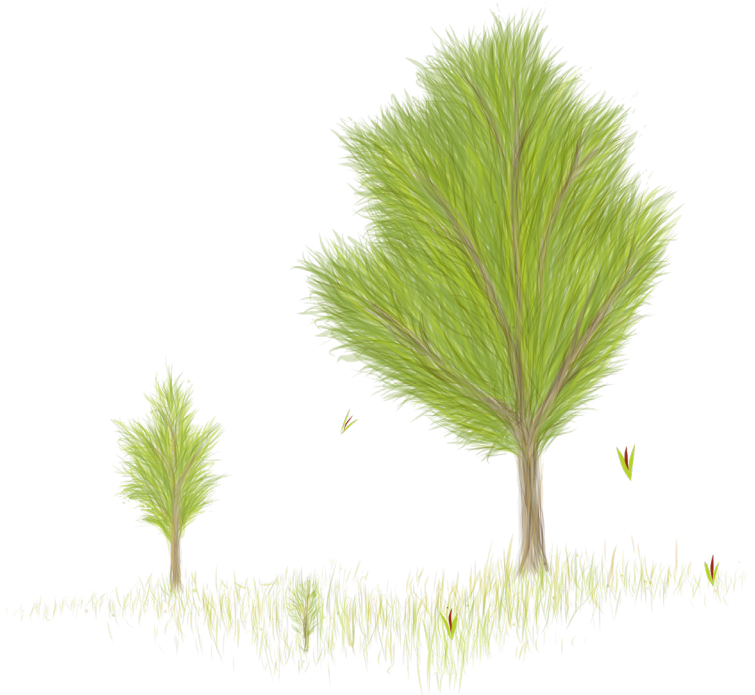
A paper plane
is a seed
cast to the sky.
Each flight
launching, rising, descending
hoping, seeking, finding
planting, sprouting, dying.
A dance of winged steps
upon a starry path.
Ever changing
always the same.
A moment's release
rising to forever.



Three Trees

Here is knowledge gained
through hundreds of planes
and thousands of flights
shared with the hope
you may also soar.

As we make and fly the plane
it is helpful to think of it
as a seed
that we see in three forms
each a different view of a tree's life
the fruitful tree
the changing seed
the growing sprout.



The fruitful tree is mature
making the memory that is the then
drawing its food from the earth and sky
forming the fruit that holds the seed.

It is humble
depending on
the sun, air, rain, and soil
to come as needed.

It is quiet
allowing its leaves and roots
to receive the good
that the elements bring.

Being humble
we can receive the knowledge gained from others
and combine it to what we have gathered
giving us a better understanding
than what we would have alone.

Being quiet
we are more sensitive
less distracted from the moment
so we can better receive what it offers.

Though small amidst the vast
by taking in what we are given
and putting it to good use
we are not lost.

This is the fruitful tree
the way of the humble gather.

Fruitful Tree



The changing seed is free
making the adventure of now
able to fly from its roots
yielding to great forces
planting in fresh soil
becoming something new.

It is trusting
the most recent of many
it is well formed to accomplish
what it was made to do.

It is peaceful
released from its birth home
soon finding another
despite infinite paths of wandering.

Being trusting
even when nothing goes well
we still expect to find a way
to make the best possible flight.

Being peaceful
we embrace the trouble
taking it as a guide
mapping the way we must follow.

We hold firm in our seeking
stable amidst buffeting winds
yielding to the driving currents
propelled in strength through our journey.

This is the changing seed
the way of the peaceful traveler.

Changing Seed



The growing sprout is emerging
joining now and then to make always
branch, leaf, bark, trunk, root
digesting the living moment
all becoming to be
as each was made to be.

It is discerning
leaving the unnecessary
taking the essential
putting all to good use.

It is aware
sensing its surroundings
reacting as it is able
changing as is best.

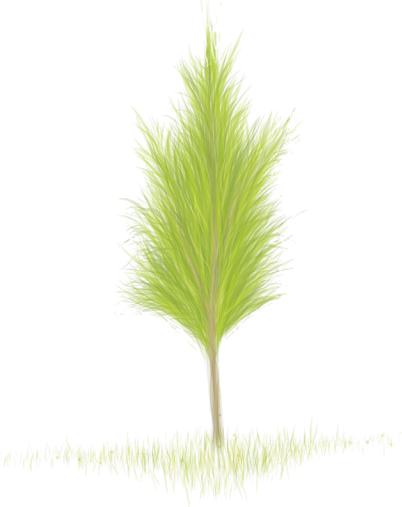
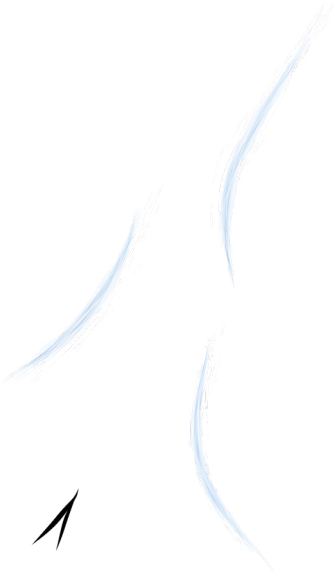
Being discerning
questioning what we think we know
continually examining our work
we make the most of what comes our way.

Being aware
embracing each moment
we seek what is
and release what was.

There is always more
there is always better
enabling us to rise free of the drafts
that drive us into the ground.

This is the growing sprout
the way of the aware refiner.

Growing Sprout



We see the seed alive
in its different phases
humble gatherer,
peaceful traveler,
aware refiner.

Each is unique
all are entwined.

To make the most of each plane
we seek for more
find much
gather some
keep what works
release the rest.

Each transition the seed makes
requires it to pass from old to new
while it continues to remain what it is.

To be a seed
it must be alive
so it may bring forth life.

If a seed is unable to change
it is dead
and returns to the elements.

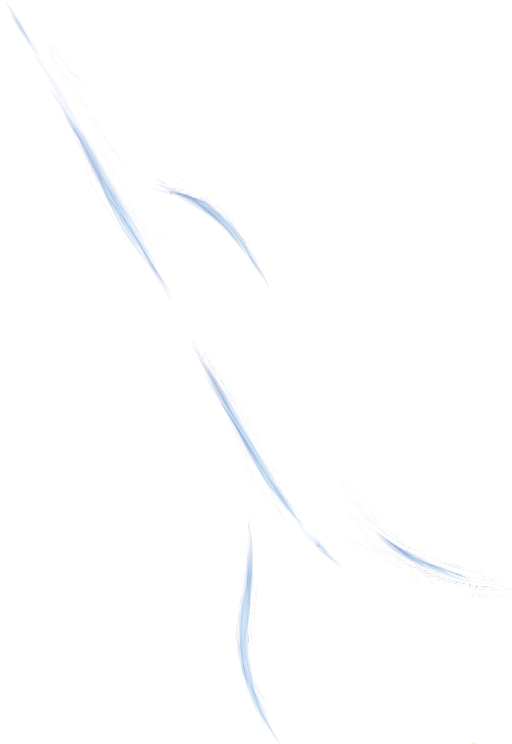
Fruitful tree,
changing seed,
growing sprout.

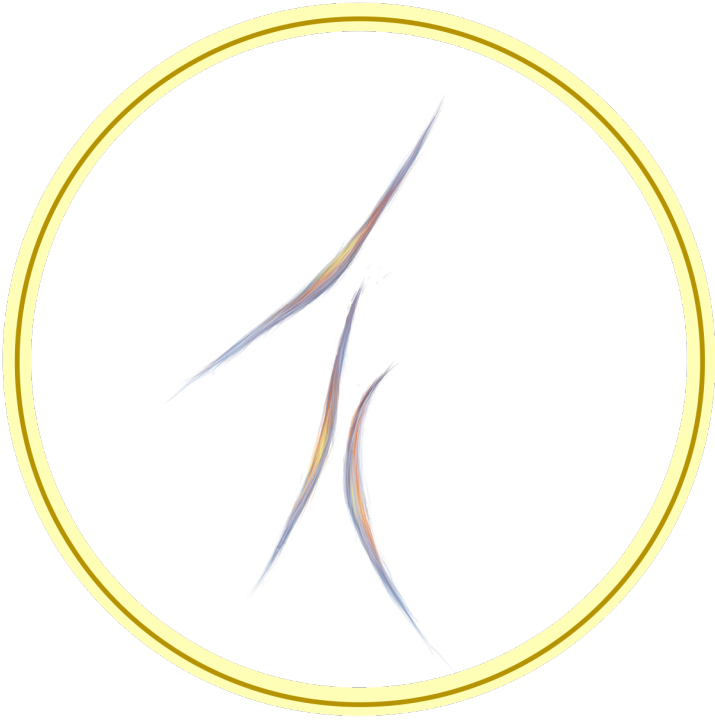
Humble gather,
peaceful traveler,
aware refiner.

Seeking the best way.

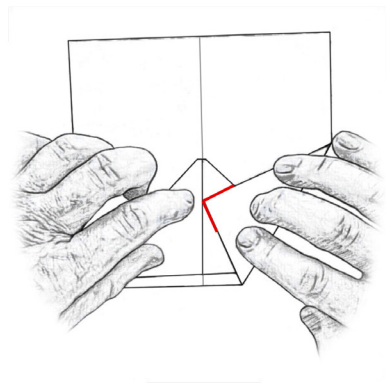
Knowing
the joy, adventure, and wisdom
of a paper plane.

Wonderful Struggle





02 Getting Ready



Crashing waves
breaking just beyond.
We breathe the spray
any moment swept into starry seas.
Crossing the watery threshold
we are sown into the earth.
Resting in a clay bed
we soon yearn to escape.

By the skill of hand
discipline of mind
tenacity of effort
we emerge
returning to the vast.

The seed is formed
to be taken by the winds.

The sprout will wake.



A Simple Task

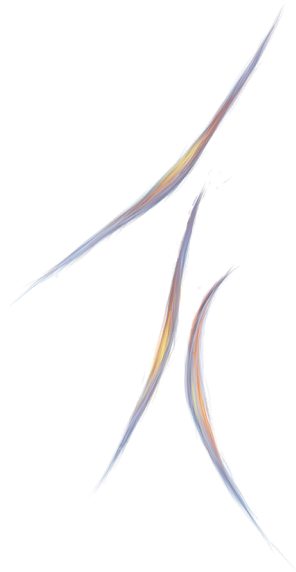
To make the plane
we use what we have been given
and what we have gathered
to guide each forming fold and cut.

We start in quiet
to help us see and remember
merging the best of now and then.

We seek the direct path
leaving the misleading many
keeping the true few.

Like a fruitful tree with its seed
we are humble and quiet
to yield and receive.

We keep it simple
to make a task
we can do.



Guiding

The following are guides
for how to set up to make a paper plane
giving basic direction for
quieting,
work space,
paper,
folding,
and tearing.

Quieting

A way to become quiet
to help be more focused and aware
is to take a breath deep,
exhale,
then listen to the silence.
Please do this now.

The more often
you do these steps
the more skilled at quieting
you will become.
Try to always start from here.



Work Space and Paper

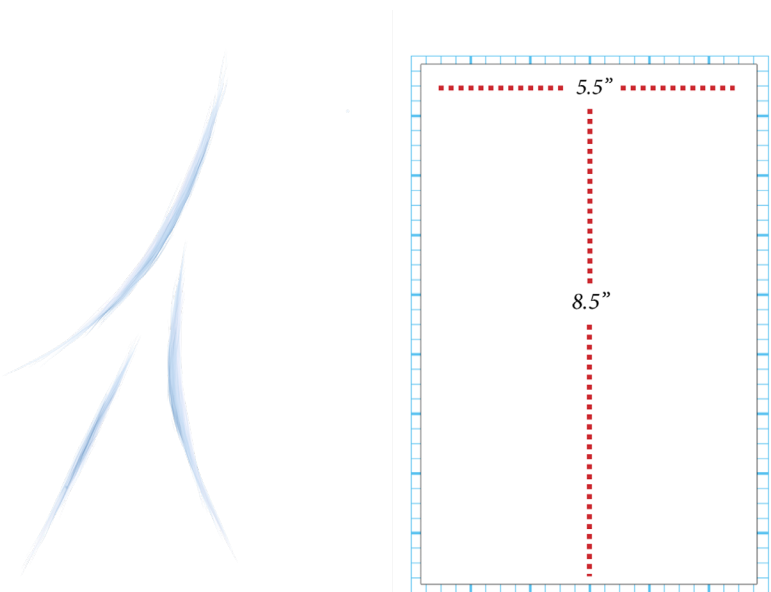
Work Space

Work in a space that allows you
to freely move your arms
and is well lit.

Paper

You need a half sheet
of standard 8.5" x 11" paper.
For most planes
bonded 20 lb weight works well
24 lb is often better.
Other weights will work too.

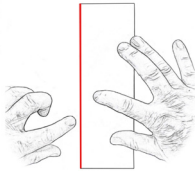
It is best to use a paper cutter
to make the 5.5" x 8.5" sheets.
It also works well
to tear the paper in half.
Before you tear
you will need to make a strong fold.



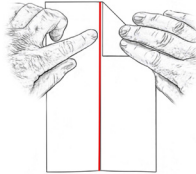
Some aids for paper folding.

- 1) Use a smooth flat hard surface.
It helps if this is a solid color that contrasts with the paper.
- 2) Find guides to make each fold using the edges, corners, and other creases.
- 3) Move the paper rather than your body into a position that works best
- 4) Crease the fold with something hard such as a finger nail, ruler, or paper folding bone.
- 5) Creases should be sharp unless instructed differently.

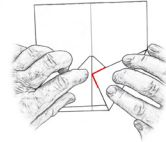
Guide Edge



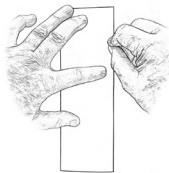
Guide Crease



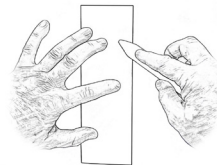
Guide Corner



Crease Finger Nail



Paper Folding Bone

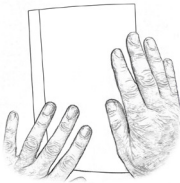


Tearing

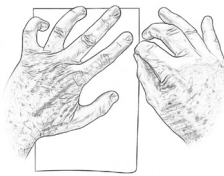
This is one possible way to tear paper.

- 1) Fold the 8.5 x 11 paper in half across its width.
Use a hard flat surface for folding and tearing.
- 2) Make a sharp crease.
- 3) Reverse the fold and sharply crease.
- 4) Flatten the paper.
Place hands on either side of the fold.
- 5) Tear by pushing or pulling the paper apart while pressing down keeping the tearing point flat as you move along the fold.

Fold in Half



Sharp Crease 1



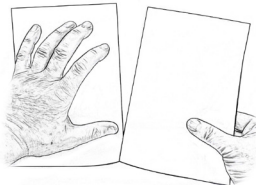
*Reverse Fold
Sharp Crease 2*



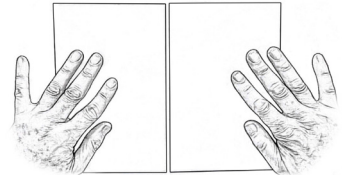
Tear Start



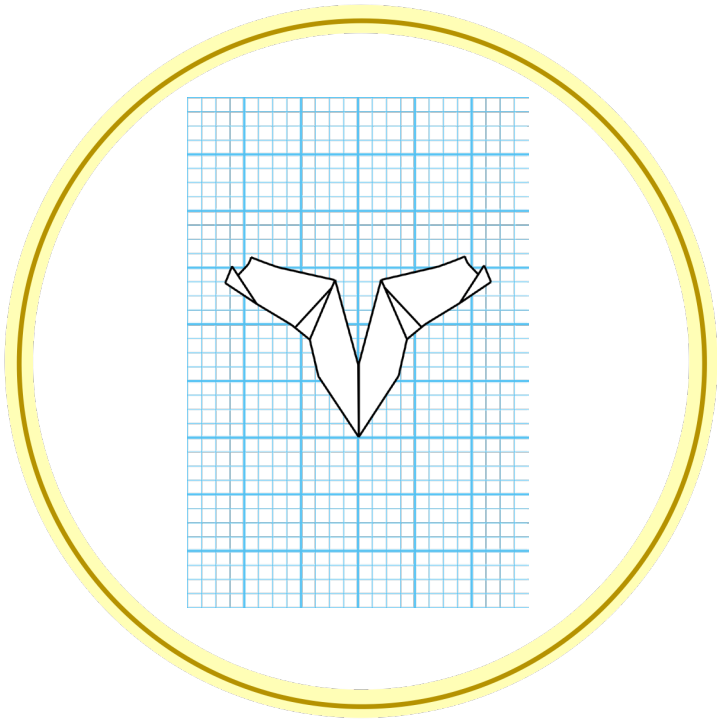
Tear End



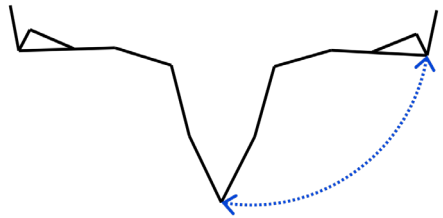
Finish



*It is helpful to prepare several pieces of paper.
If you make a mistake in folding
it often best to start with a fresh sheet
rather than trying to refold.*



The Sparrow



A womb as we form
yet a grave if we stay.
To see the unseen
we press at the shell.
It shatters
and falls away.
Darkness is the same as light
until we behold
both day and night.

Frail sunlit wings
held by planetary powers.
A shining dart
piercing the air
yearning to break the bounds.

Fleeting but sure
the promise of ultimate release.



Perserverance

As the seed is formed
to bring forth the tree
we make the plane
to bring forth the design.

It is a struggle
to make every fold just so
yet the trouble grows us
making us more
of what we can be.

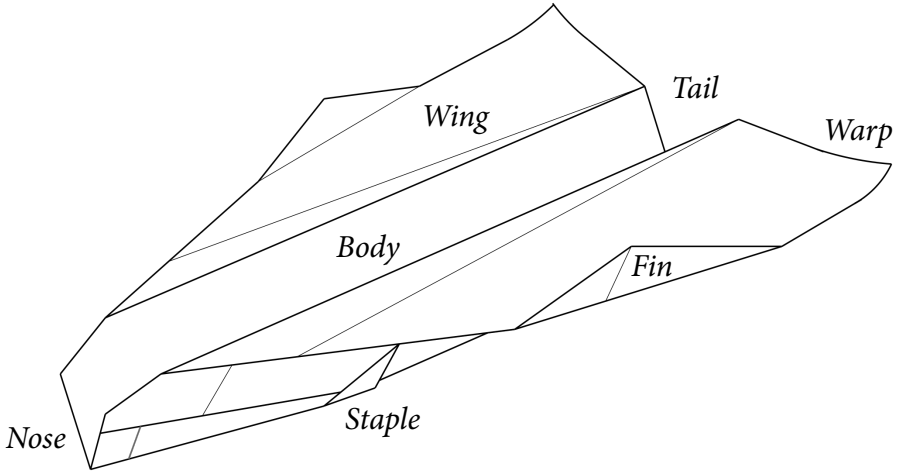
Humble, peaceful, and aware
we ready ourselves to be patient
and work through each hardship
even though we may want to quit.

We have our course
yet we must fly the whole route
to get to our new home.



Here are words naming
basic parts of the plane.

These are useful to understand
its making, maintaining, and flying.



Body
The central area of the plane
including the nose and tail.

Fin
An area enabling and guiding the plane's flight.

Nose
The area leading the plane as it moves.

Staple
The small triangle fold holding all together.

Tail
The area trailing the plane as it moves.

Warp
The bending of an area of the plane.

Wing
A large fin especially important
to keep the plane aloft.

Sparrow Design Key

Use a 5.5" x 8.5" sheet of paper.

This is half of a standard 8.5" x 11" sheet.

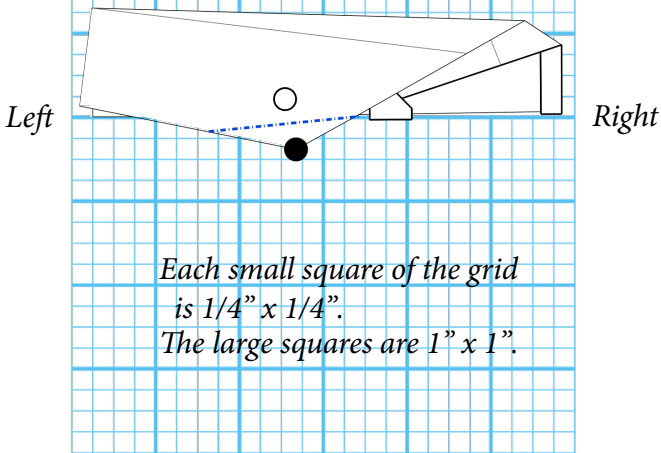
The fold should join
the black dot to the white dot.

Top

The dashed
blue line
is where
the fold
is placed.

*In this example the fold
goes from Bottom to Top.*

The solid
black lines
are edges and
previous folds.



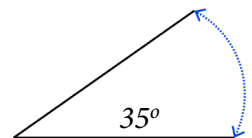
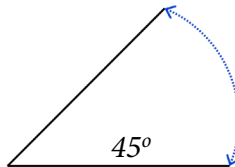
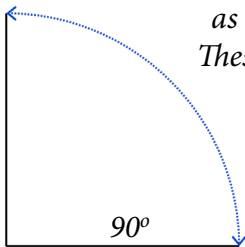
*Each small square of the grid
is 1/4" x 1/4".
The large squares are 1" x 1".*

Bottom

Folds will vary with each plane

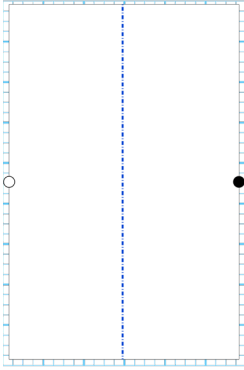
as will measures of inches and degrees.

These are *guides* and do not have to be exactly met.



Angle Guides

01



Fold the paper in half.

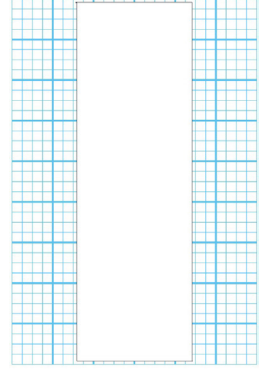
Use a 5.5" x 8.5" sheet of paper.

Match the corners and edges.

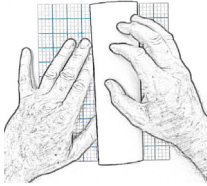
Crease sharply.

Unfold.

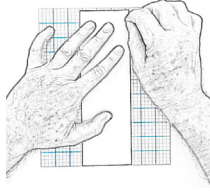
Flip over.



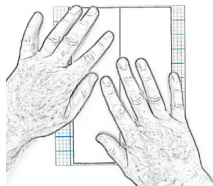
Match



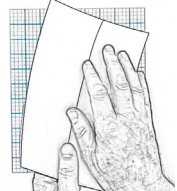
Crease



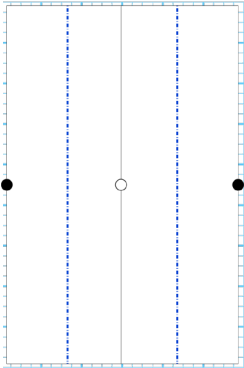
Unfold



Flip



02



Fold the paper into quarters.

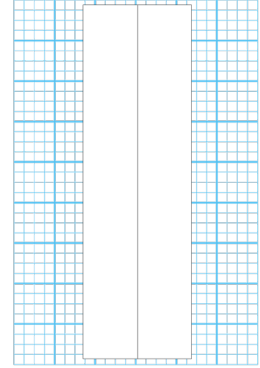
Match the right edge with center fold.

Crease sharply.

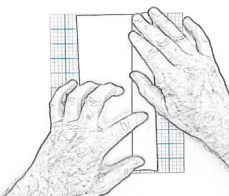
Match the left edge with center fold.

Crease sharply.

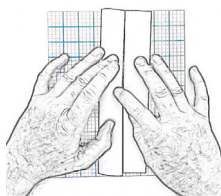
Unfold.



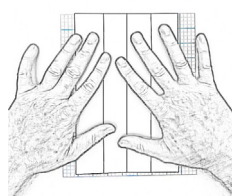
Right Match/Crease



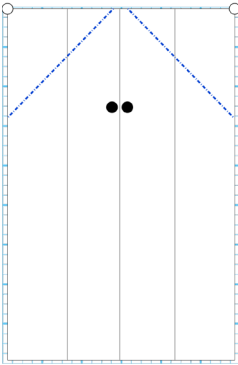
Left Match/Crease



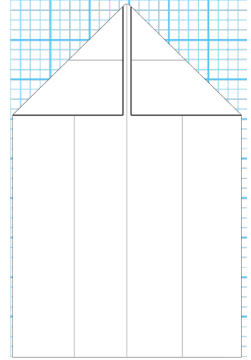
Unfold



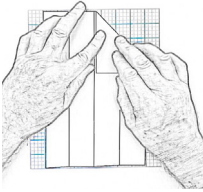
Sparrow Design



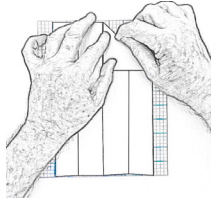
03
 Fold the top corners down.
*Match the right edge
 just short of the center fold.*
Crease sharply.
*Match the left edge
 just short of the center fold.*
Crease sharply.



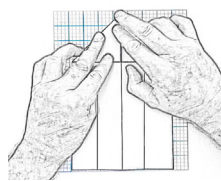
Match Right



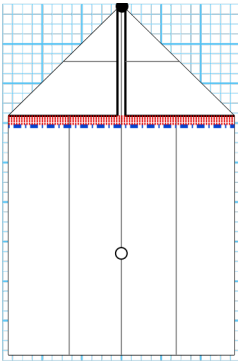
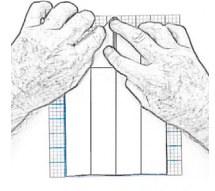
Crease



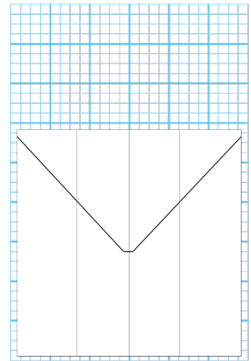
Match Left



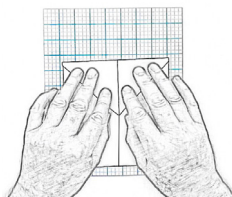
Crease



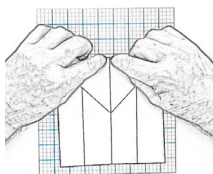
04
 Fold down the top triangle
 at the Nose.
The crease should be 1/4"
below the triangle's base.
Match the folds.
Crease sharply.



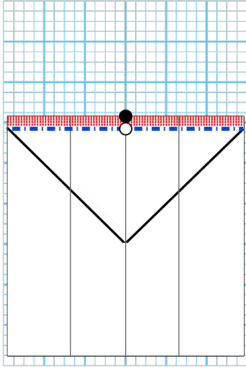
Match



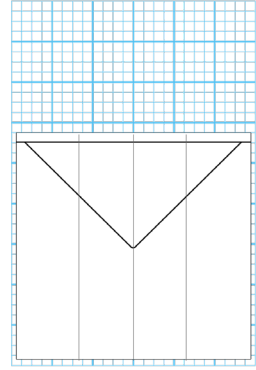
Crease



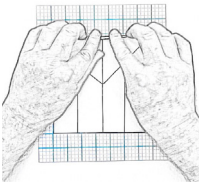
05



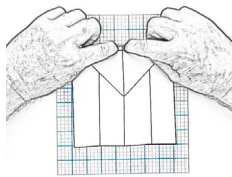
Fold the edge
 1/4" from the top.
 Match the folds.
 Crease sharply.



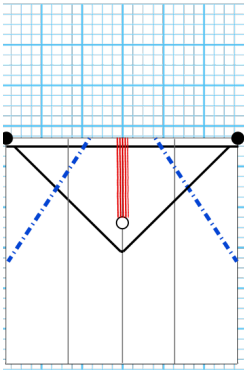
Match



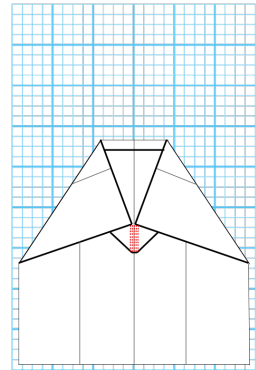
Crease



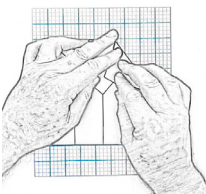
06



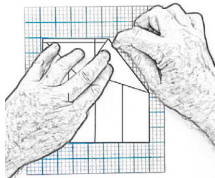
Fold down the corners
 to touch 2" from the top.
 Meet the right corner
 with the center fold.
 Crease sharply.
 Meet the left corner with fold.
 Crease sharply.
 The small triangle tip is
 3/4" from the corners.



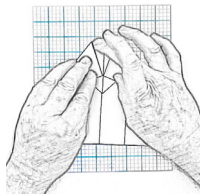
Meet Right



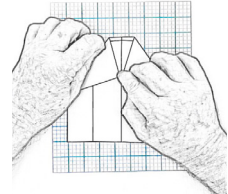
Crease



Meet Left

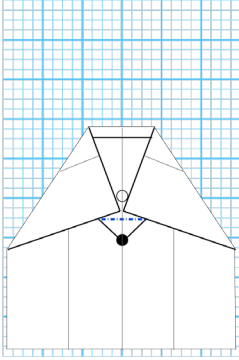


Crease



Sparrow Design

07



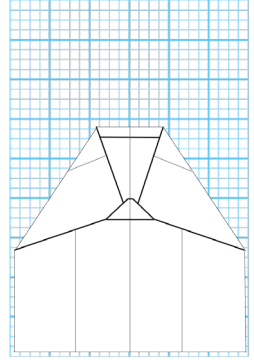
Fold the small triangle staple
toward the top.

Match the folds.

*Crease sharply to the edges
to hold the large triangles
against the body.*

Rotate 90° to the left.

Flip over.

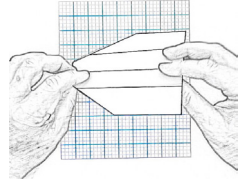
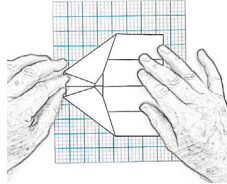
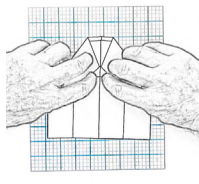
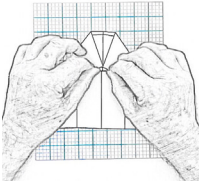


Match

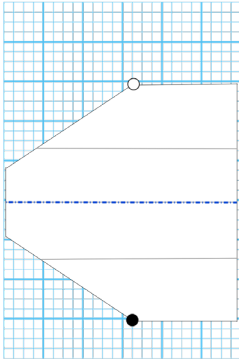
Crease

Rotate

Flip



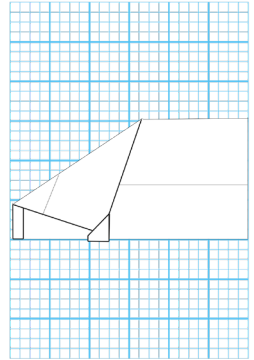
08



Fold in half at the center fold.

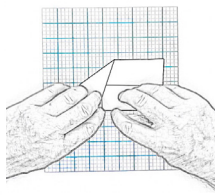
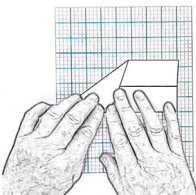
Match the edges.

Crease sharply.

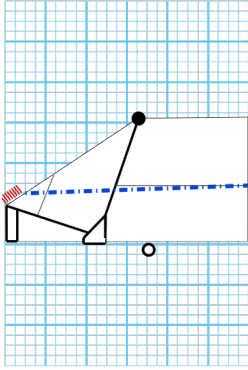


Match

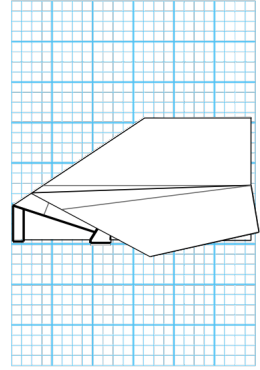
Crease



09



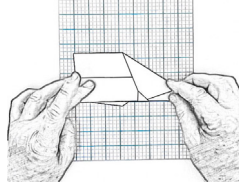
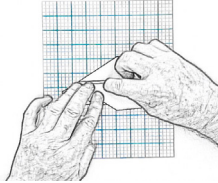
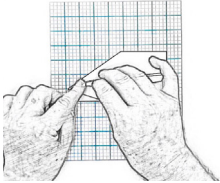
Fold the right wing.
 The corner should be
 1/4" below the body's edge.
 The crease should start
 1/2" from the nose
 finishing at the tail fold.
 Align the fold.
 Crease sharply.
 Flip over to the right.



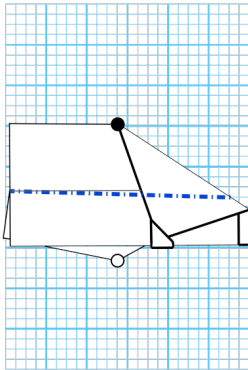
Align

Crease

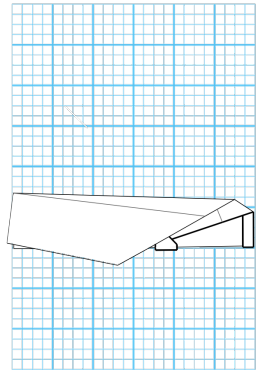
Flip



10

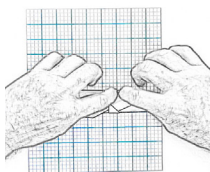
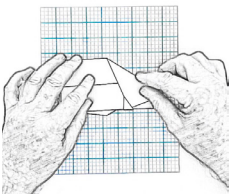


Fold the left wing.
 Match the corners and edges
 with the right wing.
 Crease sharply.



Match

Crease



Sparrow Design

11

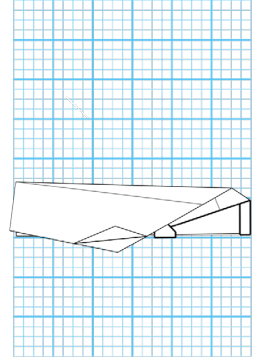
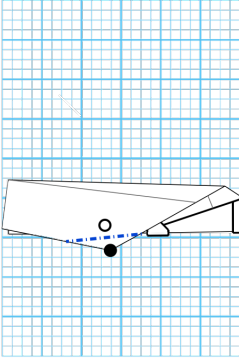
Fold the left wing fin.

*The fold starts
at the staple edge
ending 1/8" below the body.*

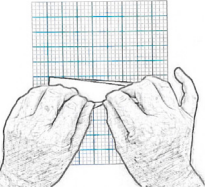
Align the fold.

Crease sharply.

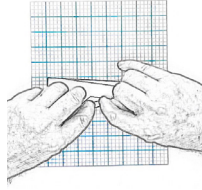
Flip over and to the left.



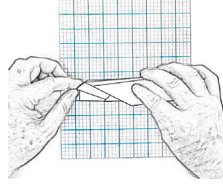
Align



Crease



Flip

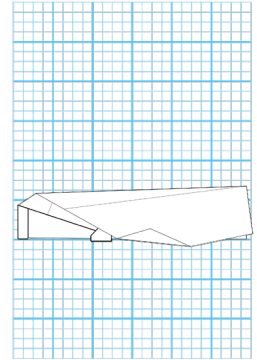
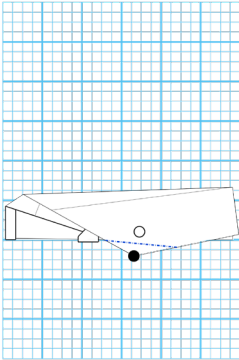


12

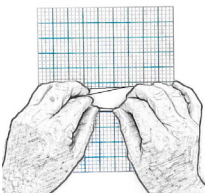
Fold the right wing fin.

*Match the edges
with the left fin.*

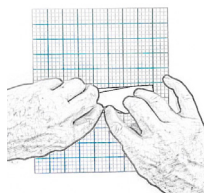
Crease sharply.



Match

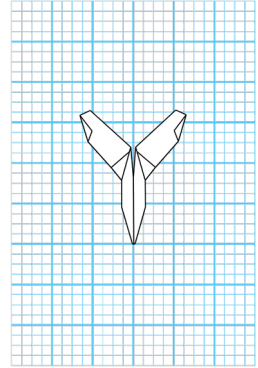
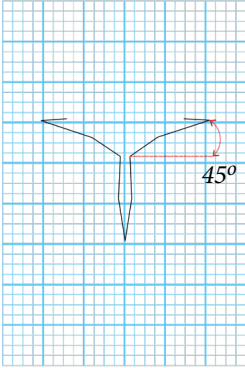


Crease



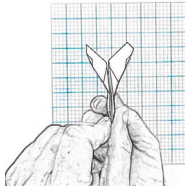
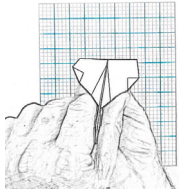
13

Form wings.
*Raise the wings
45° at the body.*



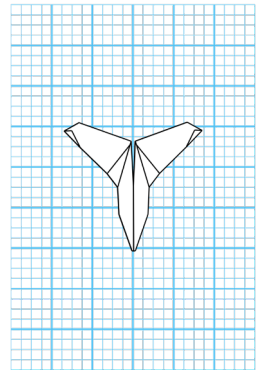
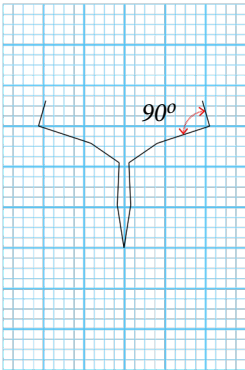
Raise

45°



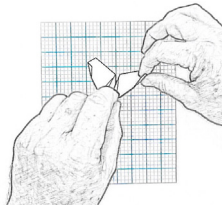
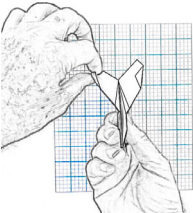
14

Form wing fins.
*Raise the right wing fin
90° at the wing.
Raise the left wing fin
90° at the wing.*



Raise Right

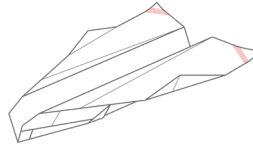
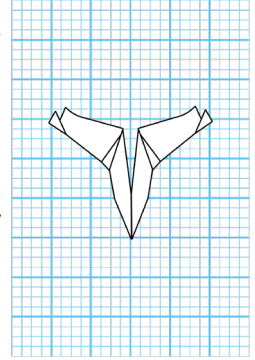
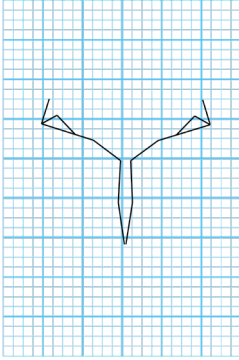
Raise Left



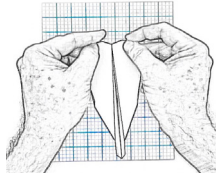
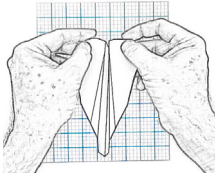
Sparrow Design

15

Form the tail edge wing warp.

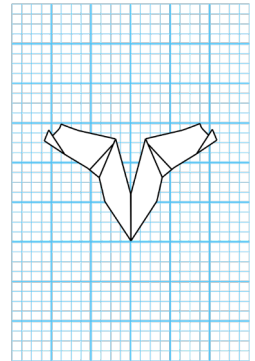
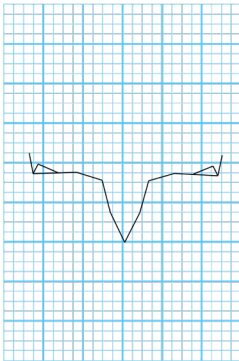
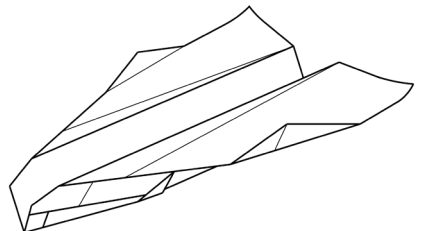
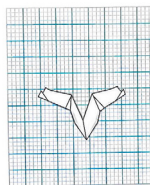
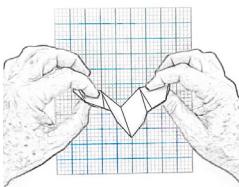
*Bend the wing corners upward 35°.**The bend should start 1/2" from the tail edge of the wing.**Bend Upward*

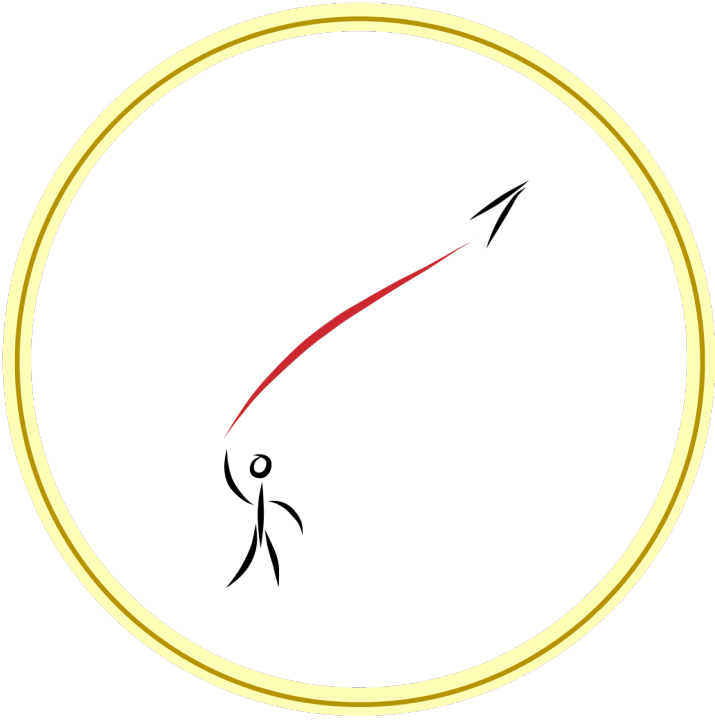
35°



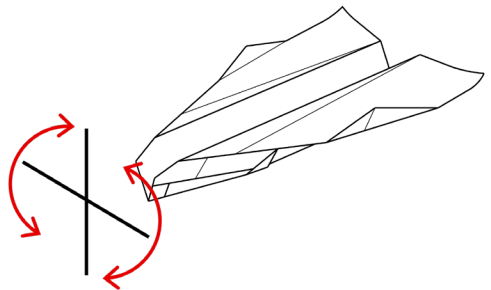
16

Finish body.

Gently pull the body at the wings to spread and flatten.*Gently Pull**Finished*



04 Naming



Eyelids part
with waking tears.
Is and is not
divide.

Now to find
the name of things.
The whole
the sphere of words
and we
a jar of seed.

Each word a step
the steps a path.
Sowing a passage
to evermore.



Atoms

Words name
what we know.
As hands work with paper
to make a plane
we form words' meanings
as they form our thought.

When well made and used
words help us become aware
to see more of what might be seen
hear more what might be heard
sense more of what might be sensed.
They enable us to do
what can be done.

Like mixing bowls
they hold ingredients
to make the same,
changed,
and new.

Words are seeds
to have, share, and understand
what we know
and what is known.

To help us
make and fly paper planes
here are a few of many
useful words.

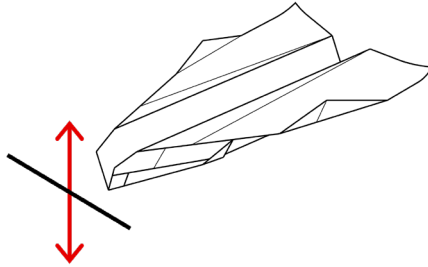


A plane is flying
when it is moving through the air.

Looking at the nose
we can name three basic ways
the plane moves.

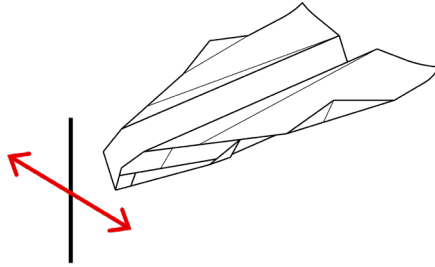
1) Pitch

The nose moves up or down.



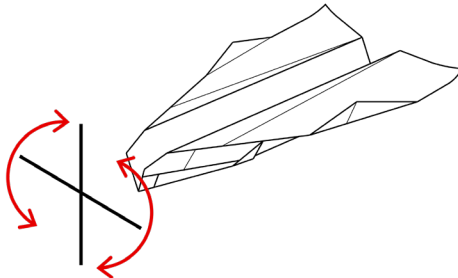
2) Yaw

The nose moves from side to side.



3) Roll

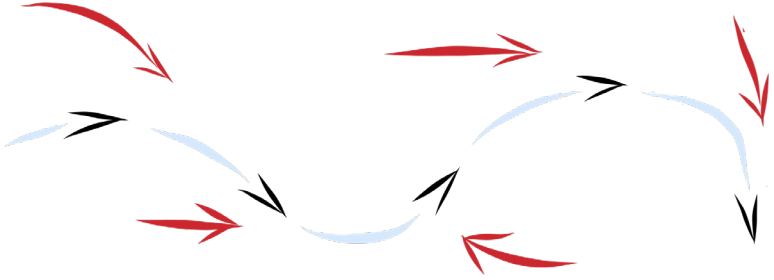
The nose goes around its center.



The Qualities of a Plane
are the likelihoods it will fly certain ways.

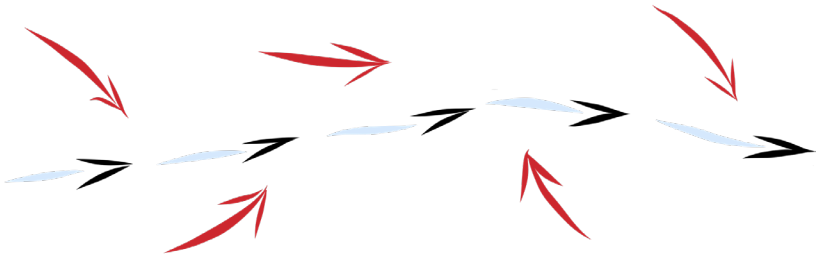
1) Responsiveness ~

This is how much the plane reacts to changes.



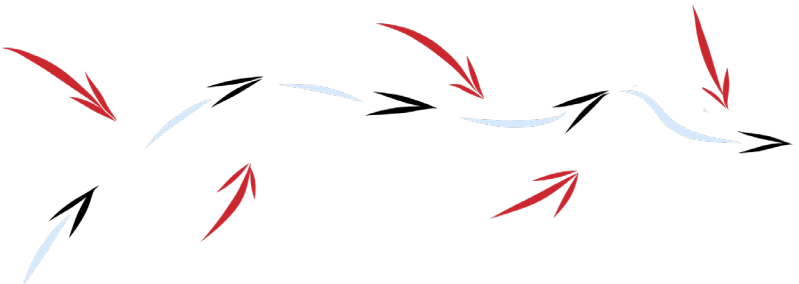
2) Stability X

This is how well the plane continues on its course.



3) Efficiency O

*This is how well the combined
Responsiveness and Stability keep the plane flying.*



The flight can be viewed in three parts.

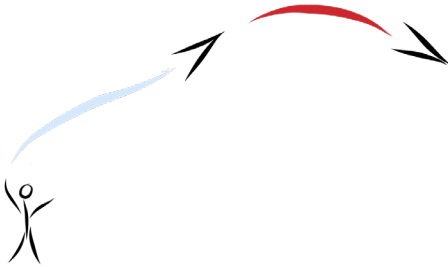
1) Launch

*Making the plane fly through the air
by throw, catapult, or other means.*



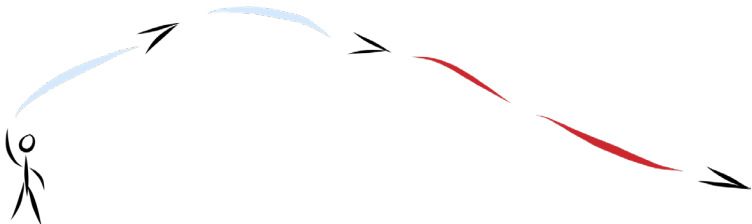
2) Transition

The flight changing from launch to glide.



3) Glide

*When the forces acting upon the flight
are no longer those of the launch,
rather others,
such as gravity and wind.*



Flight Aspects

Flight Aspects are ways to see the dynamics of a plane's flight.

1) Acrobatics ~'

This is a way to see the plane's responsiveness ~.

2) Accuracy X'

This is a way to see the plane's stability X.

3) Balance O'

This is a way to see the plane's efficiency O.

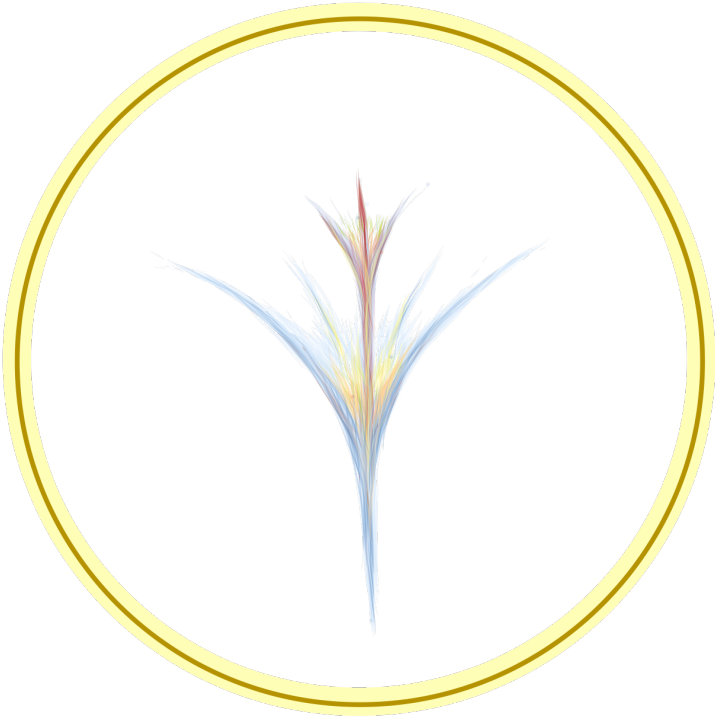
4) Distance >

This is how far the plane flies.

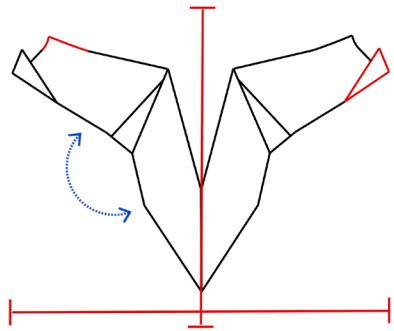
5) Duration ^

This is how long the plane keeps flying.





05 Flying



My precious one
I held you so close
each beat of my heart
an echo of your name.

So much of you
formed through me
yet always your own
you were meant to fly.

Once cradled in my hand
now flung to the wild
I can only watch and hope
your flight is long
a gentle end
on fertile ground.



Harvest

Flying a plane
is discovery.
It is the changing seed
finding the new
by means of the old.

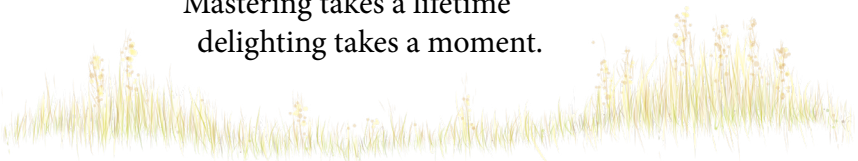
The decisions we make
and the limits of our skill
yield amazing adventures
as we launch into forces
born of cosmic spheres.

Reaping the sown
we join earth and sky
to rise, yield, and fall
and see how
what might be
matches
what really is.

Even if we do not fly
the designing, making,
keeping, playing, and sharing
give us a view
that is new.

Seed to crop to harvest
may not give us
the hoped for or expected
but always a lesson
food for thought.

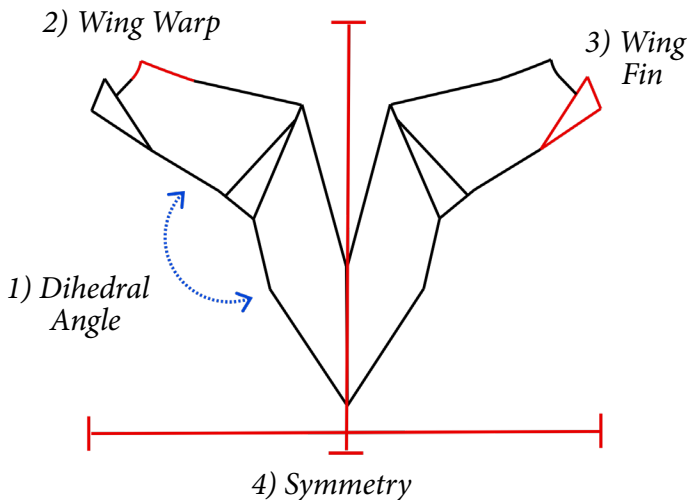
Mastering takes a lifetime
delighting takes a moment.



A paper plane
 constantly changes
 as the forces of change
 are ever present.
 Holding the plane
 bends it.
 The humid air
 weakens it.
 The pulling earth
 droops it.
 The remembering paper
 flattens it.

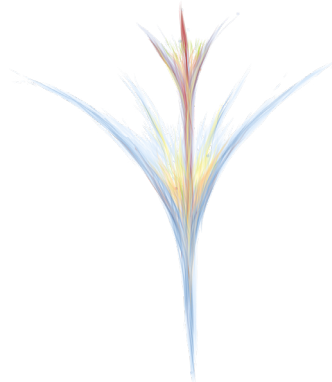
Before each flight
 be quiet and look
 comparing what you see
 with what should be.
 When you identify a difference
 between the actual and the ideal
 correct the plane
 setting its best trim.

Things to Trim

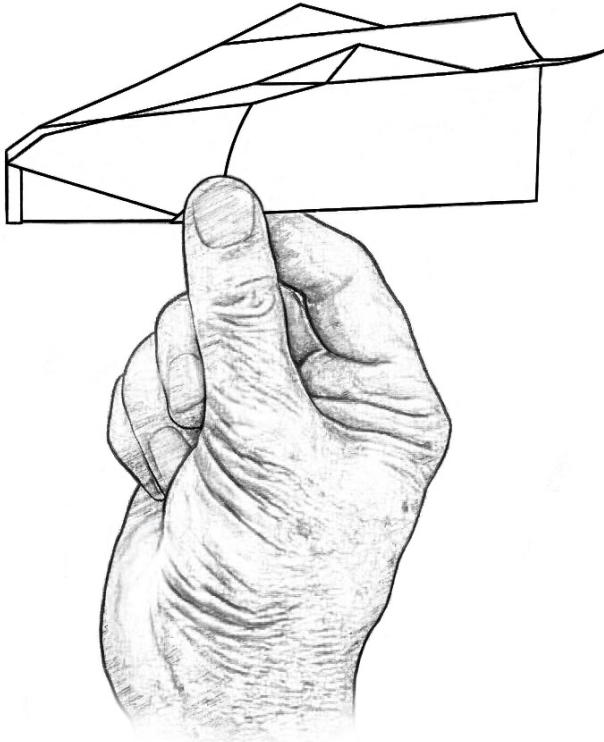


Flight Control

- 1) Dihedral Angle
The angle where the wing meets the body affects the plane's tendency to roll.
Start with the wings slightly upward to decrease the roll.
- 2) Wing Warp
The wing's bend at the tail affects the plane's pitch.
Start with the warp upward so the nose tends upward during the flight.
- 3) Wing Fin
The plane's side-to-side motion is affected by the wing fins.
Start with these straight up to reduce yaw.
- 4) Symmetry
Set both sides of the plane to be the same.
- 5) Fold Freshen
Gently redo folds as necessary to keep the plane in its proper shape with flat surfaces and correct angles.

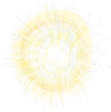


To launch the plane
hold it in the middle
on the staple
with your index finger and thumb.
Throw with what you think
is the best angle
and the necessary force
for the desired effect.



Flight Plan

- 1) Think about how
you want the flight to look.
- 2) Consider what might happen,
how that differs from your goal,
and what you might do
to get where you hope to go.
- 3) Consider the space and its contents.
Are there winds or drafts?
Are there physical obstacles
such as trees, walls, furniture?
How long and high
could the plane fly?
- 4) Choose the launch
direction, angle, and strength
to give the flight you desire.
- 5) Decide how much time
you can spend flying
and keep within that limit.



Each plane is unique
with its own personality.
This is also true
for each time and place.

Use the first few flights
to discover how the plane moves
in the flying space
by making gentle launches.

Adjust the trim
to improve the flight.

Try a full energy flight
when you are confident
in your understanding of the plane
and how it reacts to the surroundings.

Enjoy the moment
to learn and grow.
Whether or not the flight was as you desired
you can always benefit
by watching and considering what happens.

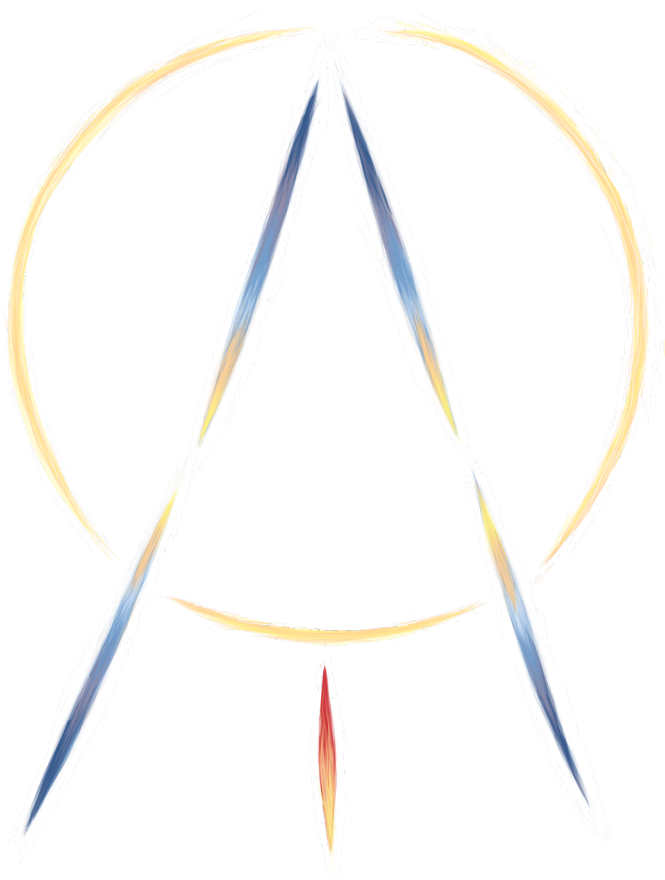
Adjust the trim
to try to get closer to your goal.
Adjust your goal
to be something you can do
given the plane, time, and space.

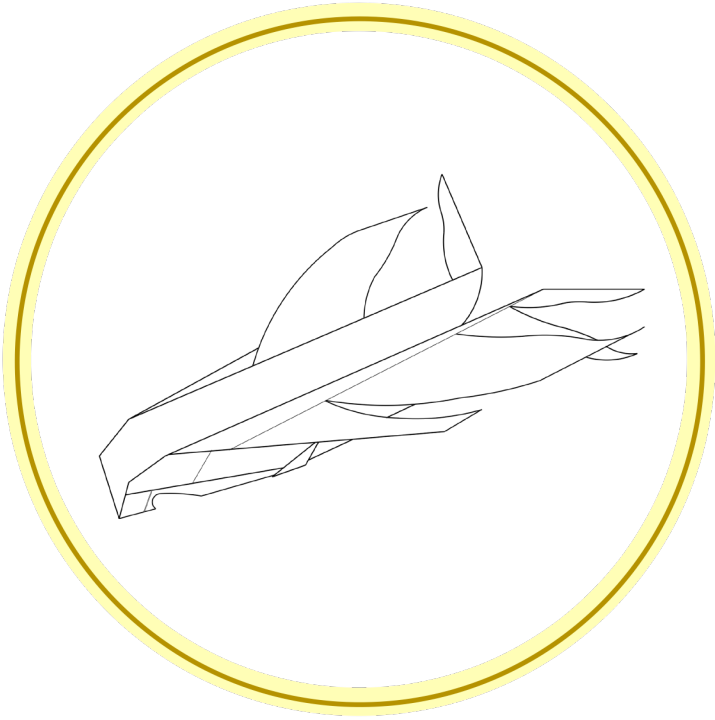
Set to launch
with new angle, direction, and strength.
When things are right
try another flight.

Safety

Paper is strong
especially when folded.
Never launch a plane
in a way that might strike someone.
A fast moving plane could injure.

If flying outside
be careful of the sun and heat.
Take appropriate precautions
against sunburn
such as a hat and sunscreen.
Make sure you drink enough fluids
to keep hydrated.





06 Designing



Earth, sun, water
the seed passes
to yield a field.

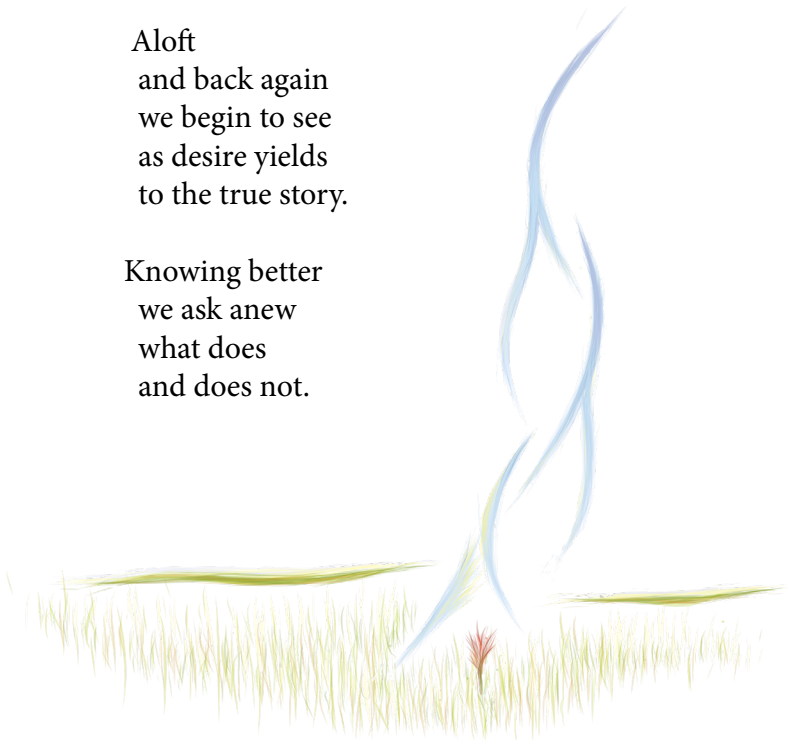
Grain
for harvesting
winnowing
grinding.

Flour
for bread
mouth
stomach.

An appetite of questions
yearning to find the best form.
Each fold and cut a revelation
hoping to answer
if this is how it should be.

Aloft
and back again
we begin to see
as desire yields
to the true story.

Knowing better
we ask anew
what does
and does not.



Further

The winged seed
with the good soil
lose themselves
becoming more.

The new takes root
transforms
and grows.

A flying thing
a beautiful thing
a useful thing
endless variation
within the bounds
of possibility.

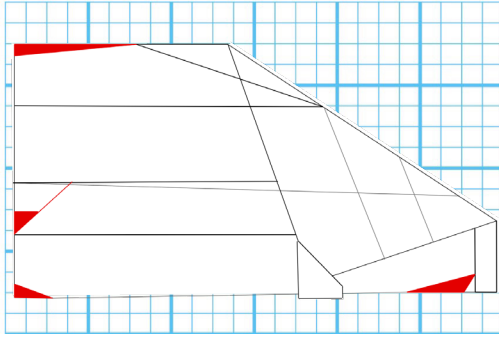
Each is lacking
yet each is enough.

Here are ways
of changing the plane
to seek
and to find.



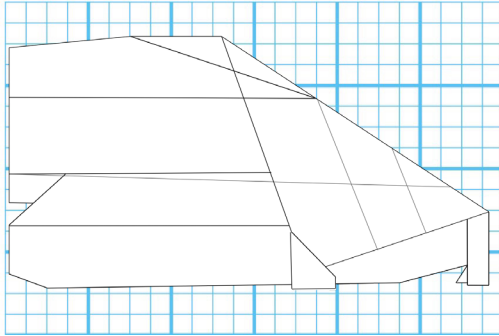
Alter the plane with scissors and folds to change how it looks or flies.

Flatten the paper to cut both sides with the same cut.



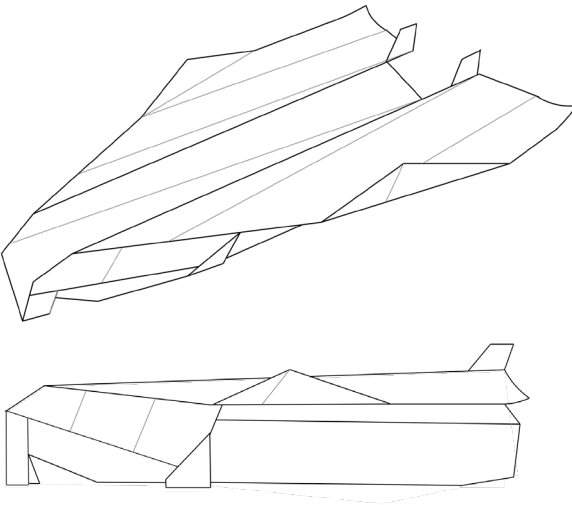
Red shows areas to cut.

Extra folds to change shape, provide guides, strengthen plane.



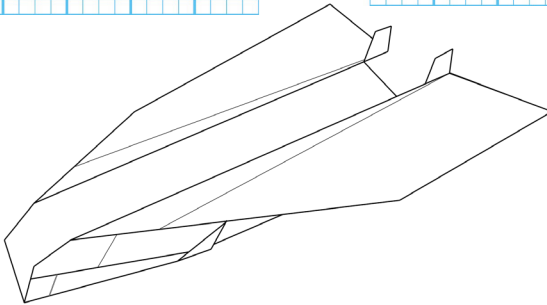
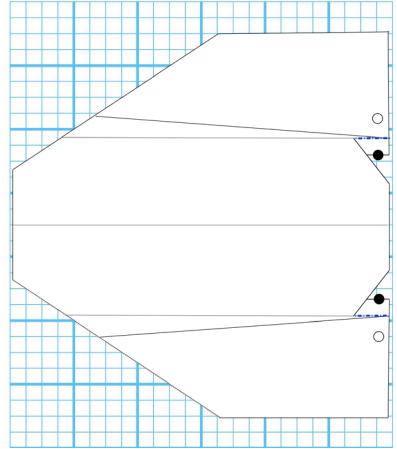
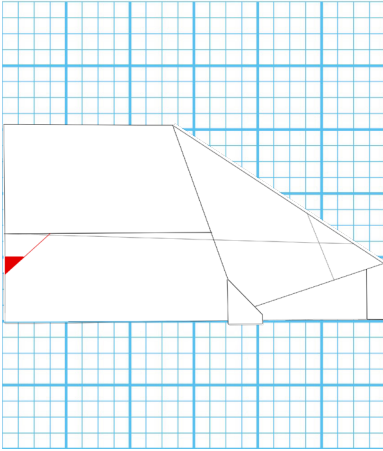
Cuts with folds create fins and other features.

Add, subtract, change, invent to make the plane more what you hope it might be.

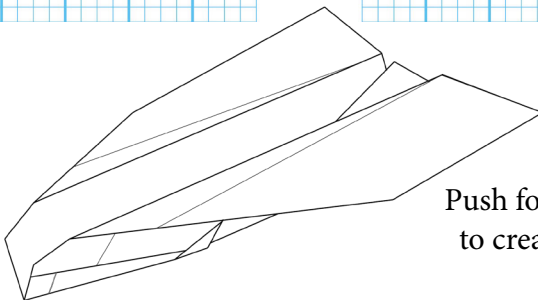
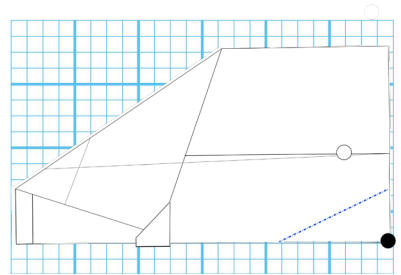
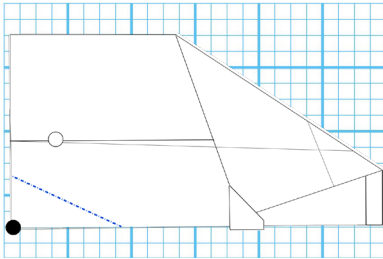


About Cutting and Folding

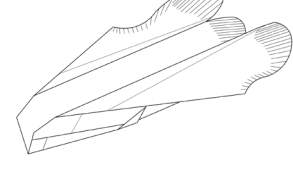
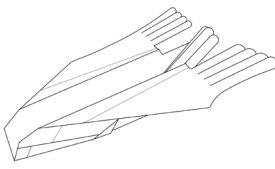
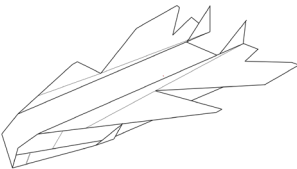
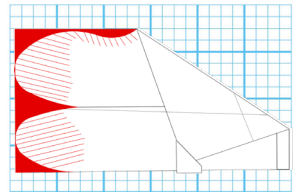
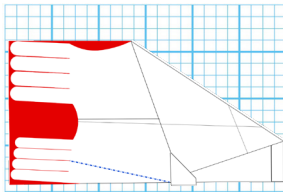
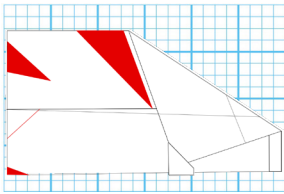
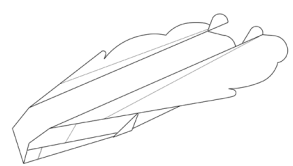
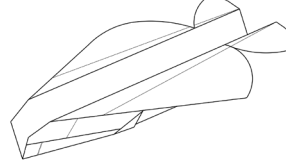
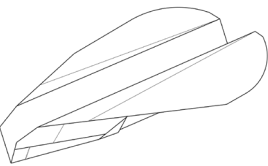
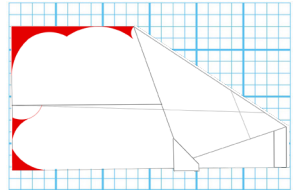
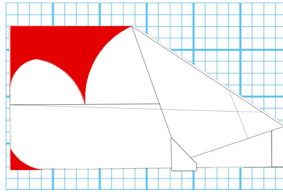
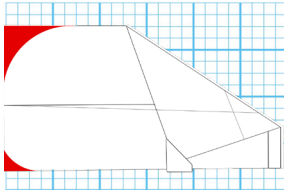
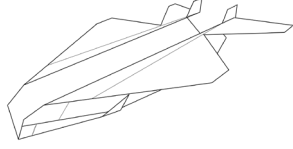
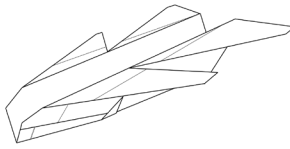
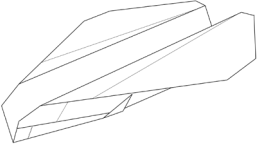
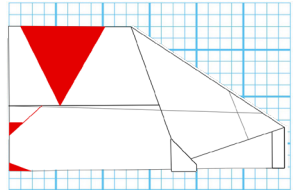
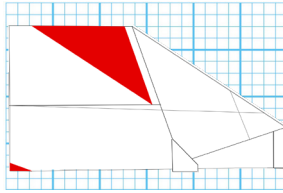
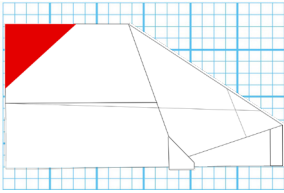
Cutting and folding to create cut out tail fins.



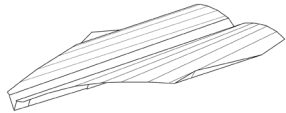
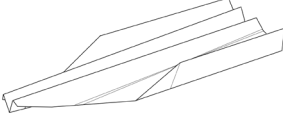
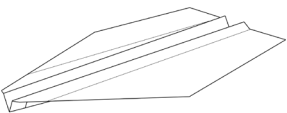
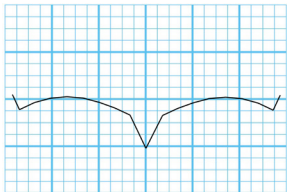
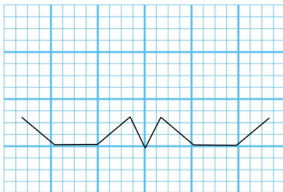
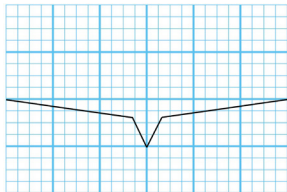
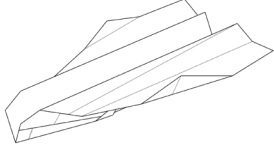
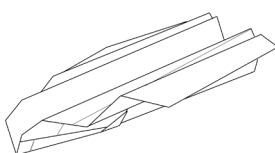
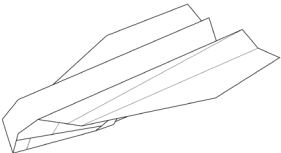
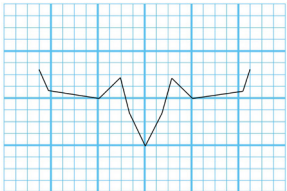
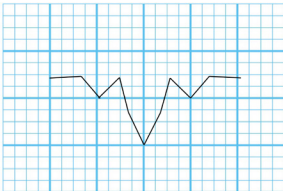
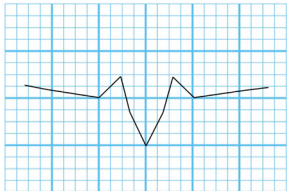
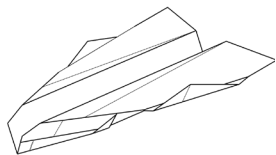
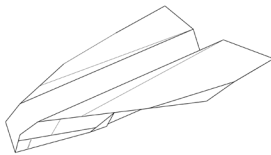
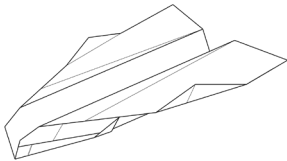
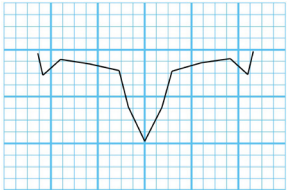
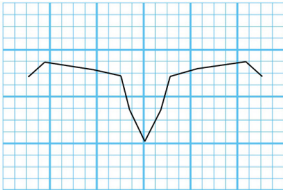
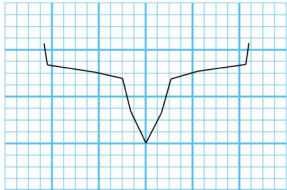
Folding to create a no cut tail fin.



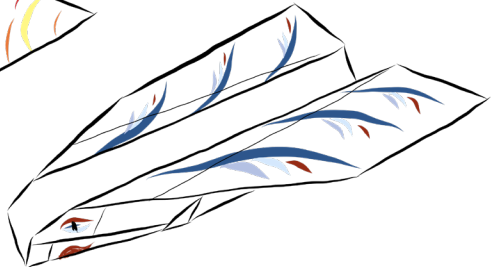
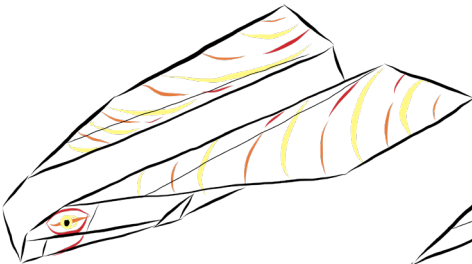
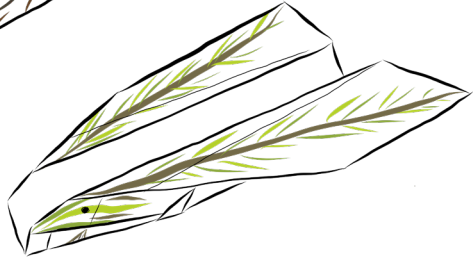
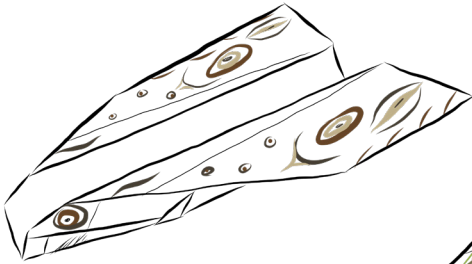
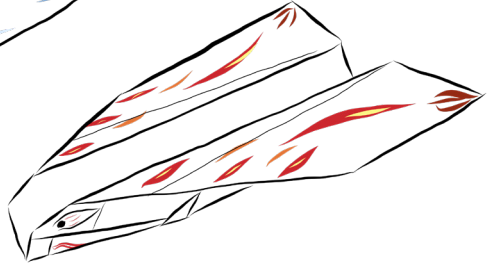
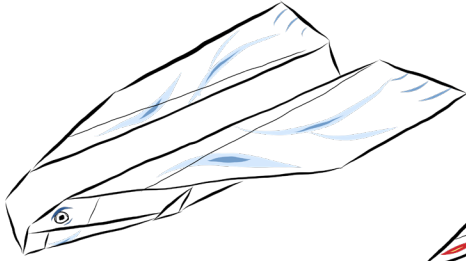
Push folded section up to create the fin.



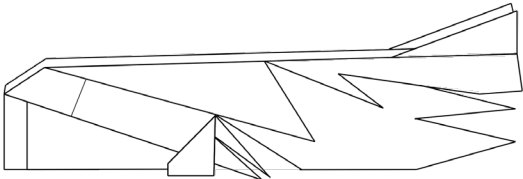
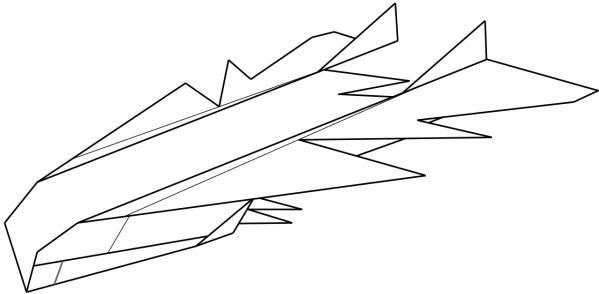
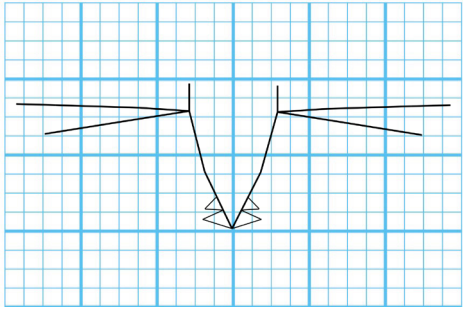
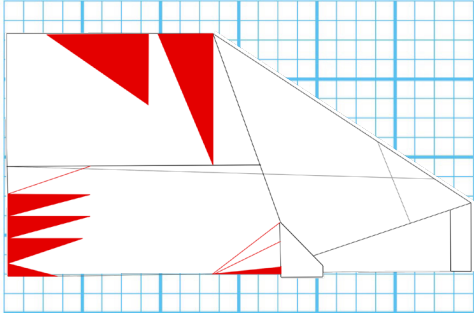
Folding

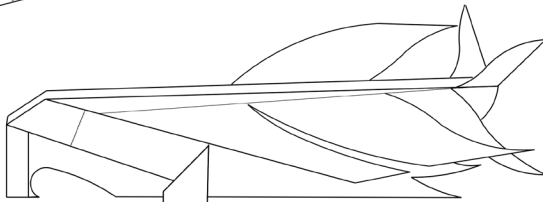
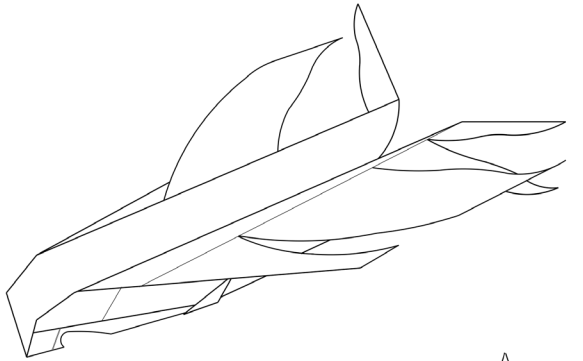
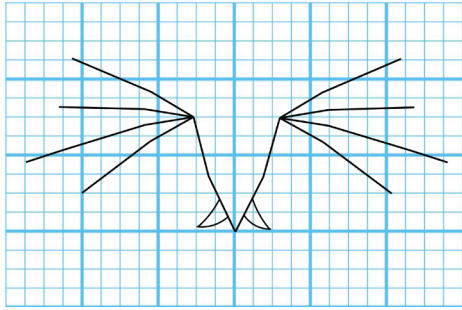
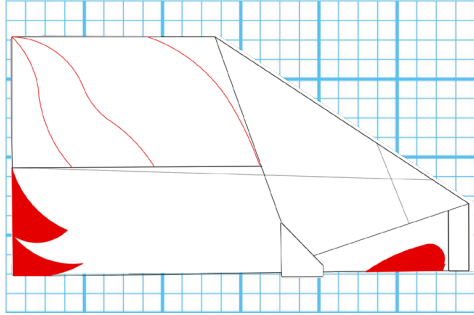


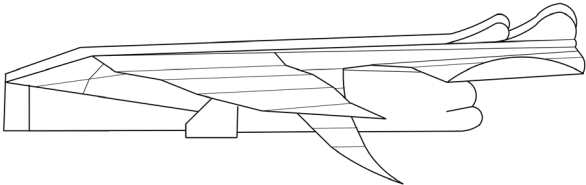
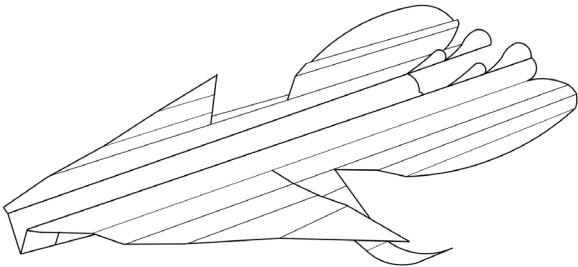
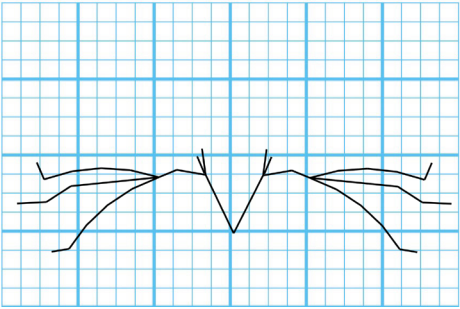
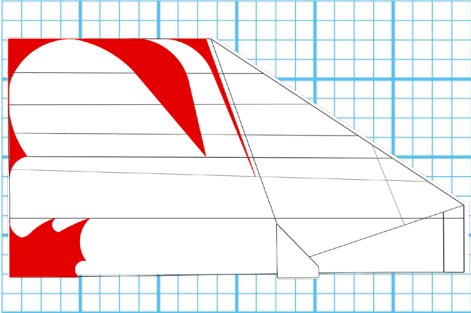
The plane can be decorated
with colors, drawings,
and many other things.



Design Seeds







Doing alone fulfills
doing together completes.

Realizing a vision
brings peace.

Sharing it
brings meaning.

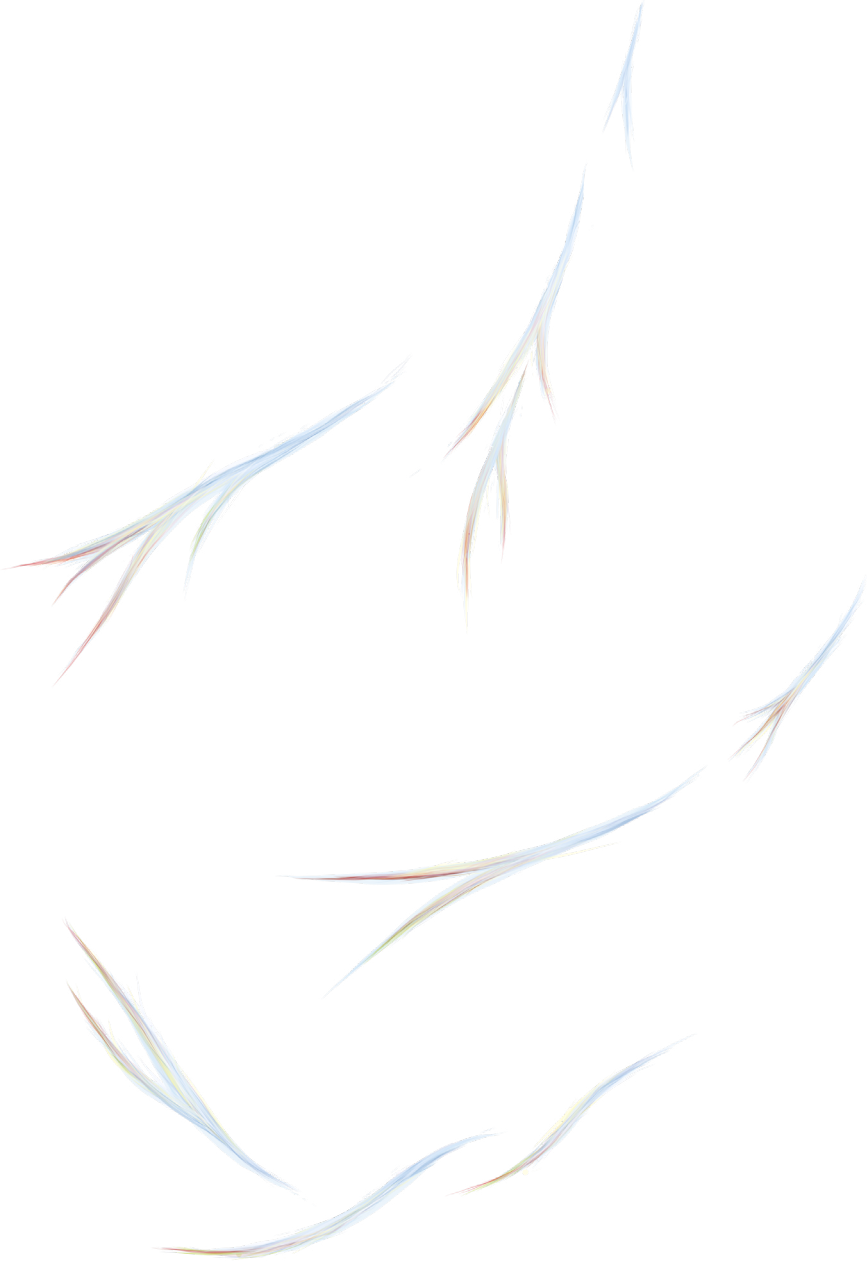
Uniting it
brings life.

It is good to create a plane on your own
it can be better to work with others.

It is not always easy
to merge differing concepts
but the result may be surprising and new.

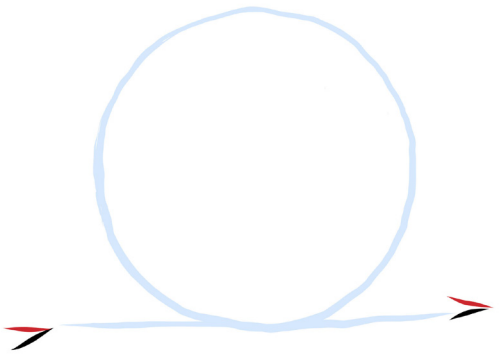


Fulfilled and Complete





07 Activities

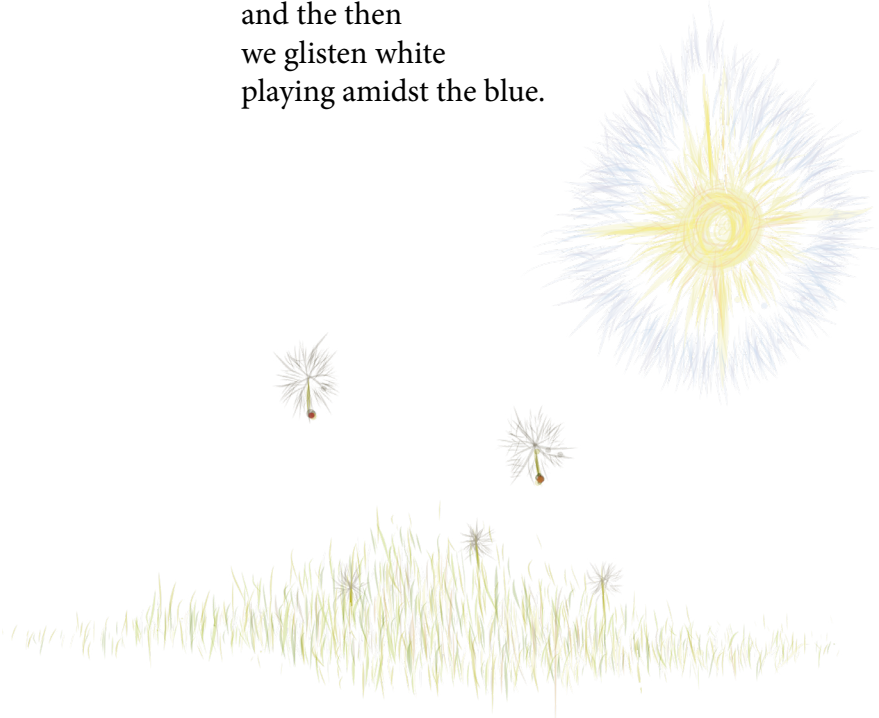


We leave our shell
limbs unfurl
reaching to the sun.
We begin to be
what we might be.

Awaking is craving.
There is always more.
Never filled
until stilled.

Soon again
we are
what we were.

Yet between
the then
and the then
we glisten white
playing amidst the blue.



Adventure

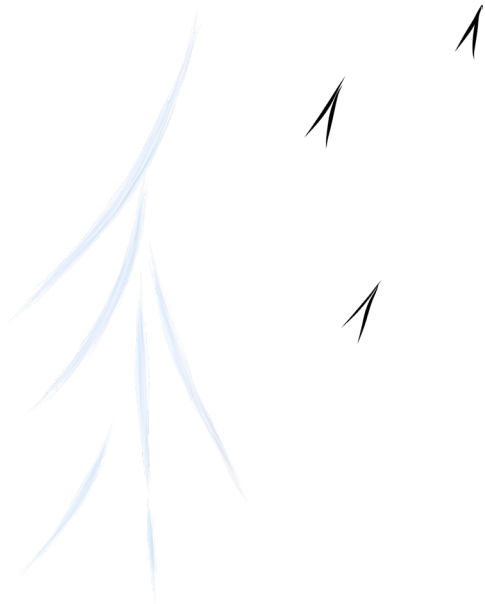
A plane is a means
to see what is
how we are
and discover others.

Made by our hand
it echoes us
in its form
and in its action.

Seed, tree, sprout
to explore, gather, refine.

The more we do
the more we become.

Flying, discovering, considering
here are paths
to adventure.

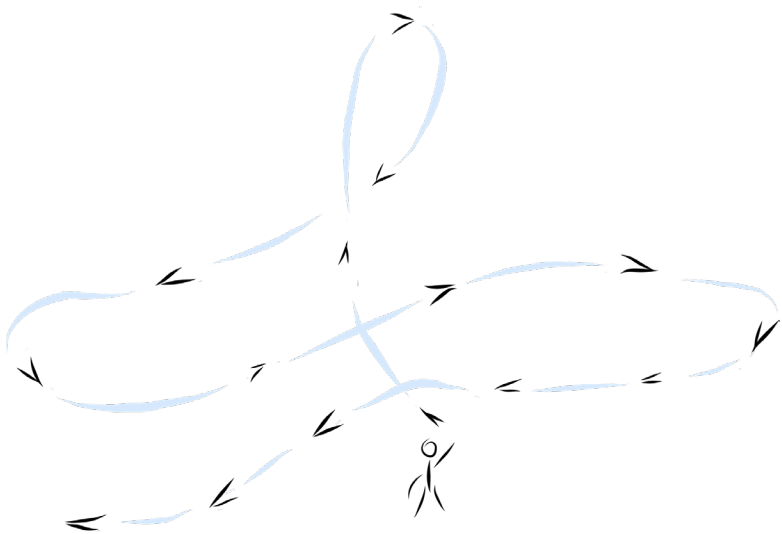


Flying just to fly
frees us
from the ever present trouble.

We cease doing
what we would rather not
by doing something else.

It is a means of quieting
to gain more of what there is.

An efficient plane *O*
with balanced flight *O'*
works well to this end.



About Focused Flight

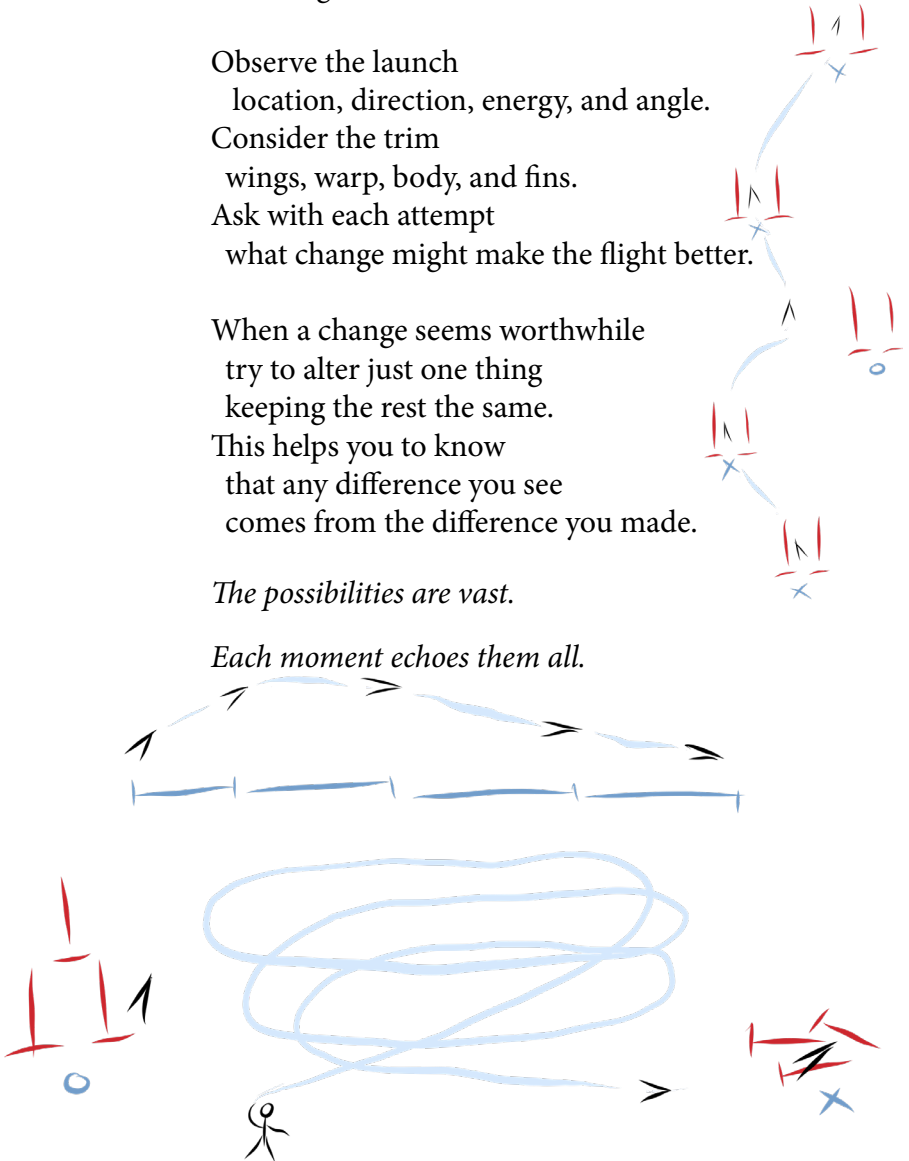
Flying with a goal
 grows us
 to better see, discern, and do.
 Whether our objective is
 acrobatic \sim , accuracy \times
 distance $>$, or duration \wedge
 each flight is a lesson.

Observe the launch
 location, direction, energy, and angle.
 Consider the trim
 wings, warp, body, and fins.
 Ask with each attempt
 what change might make the flight better.

When a change seems worthwhile
 try to alter just one thing
 keeping the rest the same.
 This helps you to know
 that any difference you see
 comes from the difference you made.

The possibilities are vast.

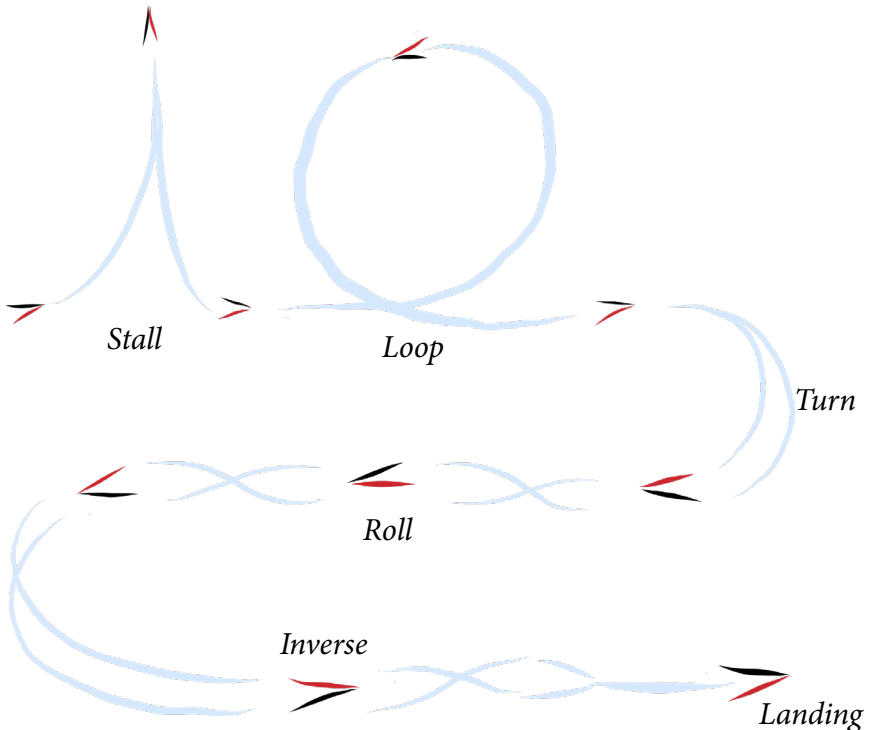
Each moment echoes them all.



Acrobatics ~' is a way we see
the plane's responsiveness ~.
It can be measured by
how interesting the flight is
or how closely it matches a goal.

Trim the flight control
and launch the plane
so it flies in a specific way.
Acrobatics helps us learn
how what we do
joins with what there is
showing how our actions
interact with the flying space
and the things it contains.

Here are a few acrobatic maneuvers.



Accuracy

Accuracy X' is a way we see
 the plane's stability X .
 It can be measured by
 by how well it
 hits a target,
 lands at a specific place,
 or flies through a set course.

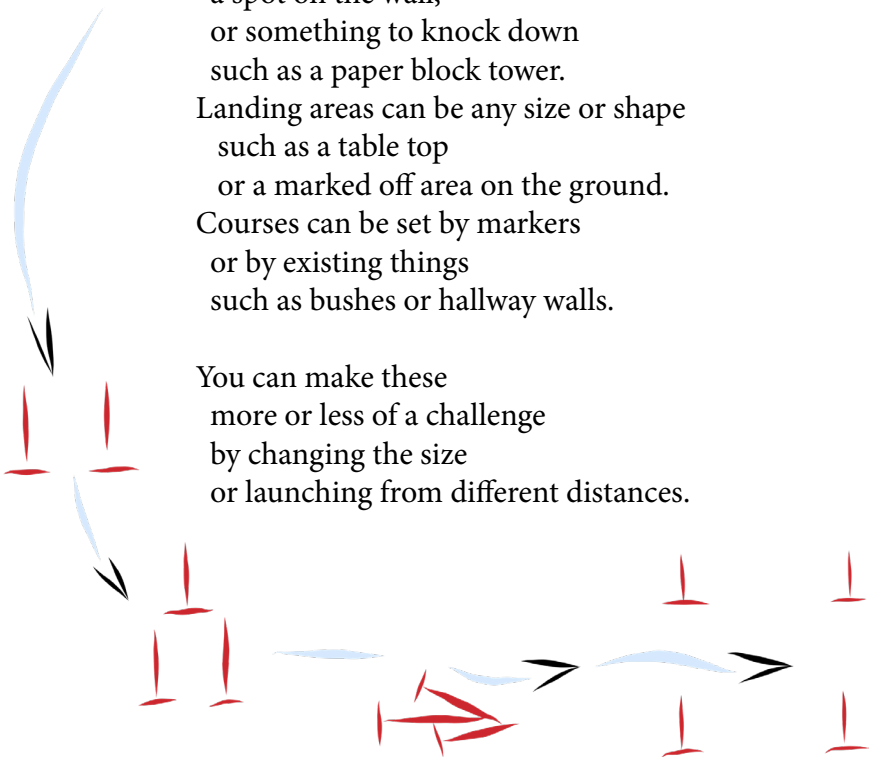
Trim the plane
 so it flies straight and level
 and goes the way
 you launch it to do.

Targets can be most anything
 the plane will not harm
 such as a tree,
 a spot on the wall,
 or something to knock down
 such as a paper block tower.

Landing areas can be any size or shape
 such as a table top
 or a marked off area on the ground.

Courses can be set by markers
 or by existing things
 such as bushes or hallway walls.

You can make these
 more or less of a challenge
 by changing the size
 or launching from different distances.



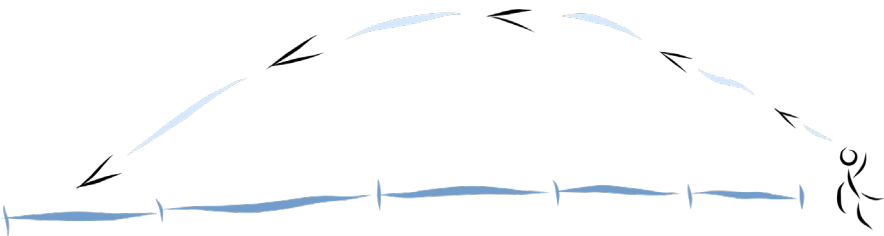
Distance > is a way to see
the plane's efficiency O.
It is measured by
the units of length
between the launch and landing points.

To achieve the best distance
trim so the plane
is more stable than responsive
keeping both properties balanced O'.

Watch and analyze the flights
to adjust each launch
position, energy, direction, and angle
making the most of the flight space limits
such as height, barriers, and wind.

Measure flight distance
with things like
a tape measure,
counting steps,
or preset distance markers.
To make comparisons
with other flying times and spaces
measure the informal units
by a common standard
such as measuring your steps with a yardstick.

A fast straight flight works well.



Duration

Duration \wedge is a way to see
the plane's efficiency \circ .

It is measured by
the units of time
between the flight's launch and landing.

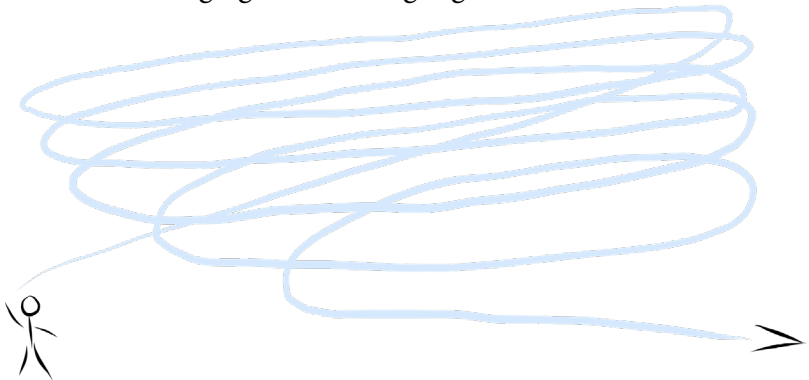
To achieve the best flight duration
trim so the plane
is more responsive than stable
keeping both properties balanced \circ .

Watch and analyze the flights
adjusting for each launch
the position, energy, direction, and angle
making the most of the flight space limits
such as height, barriers, and wind.

Measure the flight duration
with a things like
a stopwatch or counting.

To make comparisons
with other flying times and spaces
measure the informal units
by a common standard
such as using a watch to time counting to ten.

A high gentle circling flight is best.



Recording your flight history
 better your understanding
 of the planes and the flying.

Through writing
 you consider each plane and flight
 more completely.

Through reading
 you can see and learn
 from the story of change
 across space and time.

Here are some suggestions
 to help with your logging.

Abbreviations

Plane Aspects

~ Responsiveness X Stability O Efficiency

Flight Aspects

~' Acrobatics X' Accuracy O' Balance
 > Distance ^ Duration

Quantity and Quality

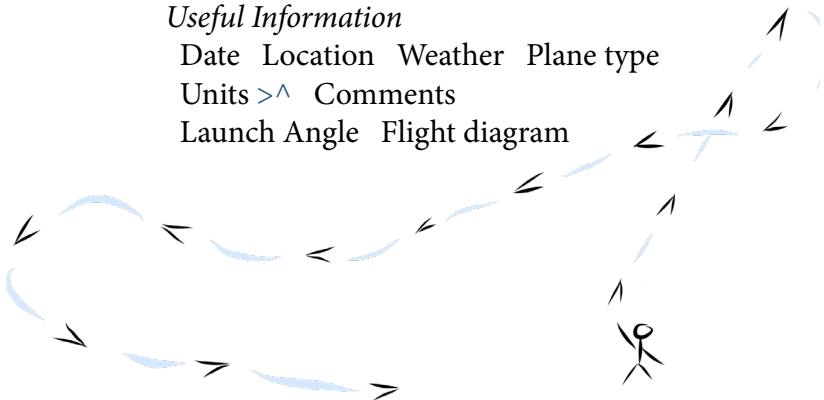
. least - low + medium * high ! most

Useful Information

Date Location Weather Plane type

Units >^ Comments

Launch Angle Flight diagram



Flight Log Example

Flight Log: DW Scott

Date: 2020.03.08

Location: West Park

Weather: Sunny with light NNW wind

Plane type: Sparrow ~+ X+ O+

Distance >: steps

Duration ^: seconds

01) >125 ^10 ~+ X+ O!

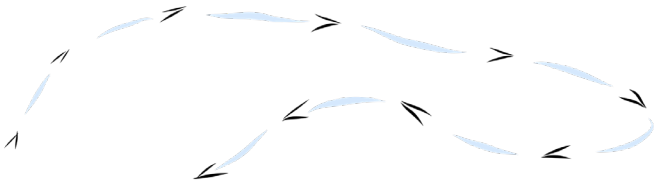
This flight went a distance > of 125 steps.

It's duration ^ was 10 seconds.

The acrobatics ~' were good +.

The accuracy X' was good +.

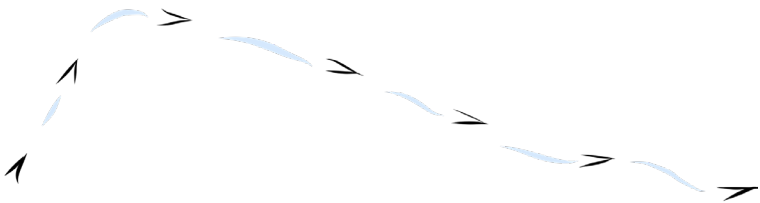
The balance O' was excellent !.



02) >50 ^08 ~+ O+

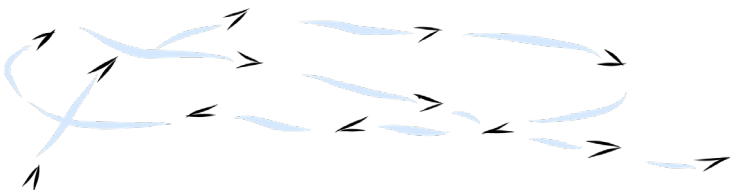
Trimmed higher dihedral. Wind still.

Very straight.



03) >20 ^20 ~+ O*

Caught a thermal. Slow circling flight.



Each plane is unique
 as are its interactions
 with earth and air.
 Associating the plane's qualities
 with those we see in others and ourselves
 helps us to see the story
 in the plane's adventures.

The *Plane Qualities*
 with the *Seed Forms*
 amidst the *Observer Contexts*
 map to a plane's *Characteristics*
 giving us its personality.

Plane Qualities

Responsiveness ~

This is how much the plane reacts to changes.

Stability X

This is how well the plane continues on its course.

Efficiency O

This is how well the plane keeps aloft.

Seed Forms

Fruitful Tree Y

The humble gather quietly receives
 that which nourishes and sustains
 so it may mature and bear fruit.



Changing Seed ´

The peaceful traveler trusts in its path
 embracing whatever comes its way
 to strengthen and guide to its goal.



Growing Sprout v

The aware refiner sifts through all things
 seeking whatever is valuable
 discarding whatever is without worth.

Personality Characteristics

Observer Contexts

Self =

Seeing how one sees themself.

Others #

Seeing how one is seen by others.

Else &

Seeing how one interacts with the rest.

Determining Characteristics



- 1) Decide the *Qualities* (~ X O)
along with an intensity (. - + * !)
Forms (Y ‘ v)
and *Contexts* (= # &)
you find useful to tell the story.
- 2) Considering the mix
seek a word for the *Characteristics*
the plane shows.
- 3) You can use the following guide
as a starting point
for suggestions to help find
the right word.



Root Characteristics Guide

Moderate Quality Intensity +

		~	X	O
Y	=	mature	curious	childlike
	#	generous	responsible	social
	&	collector	diligent	keeper
‘	=	flexible	studious	dynamic
	#	agreeable	trustworthy	considerate
	&	adventurous	energetic	engaged
v	=	clever	reflective	analytic
	#	spontaneous	discerning	wise
	&	explorer	inquisitive	humble

Personality Example

Finding the right words is a journey.
 The *Root Characteristics Guide* is a starting point.
 A dictionary with synonyms and antonyms
 is a great help.
 In the end
 use the words that work for you.

Plane Qualities/Intensity

~+ Moderately Responsive
 X- Not Stable
 O! Extremely Efficient

Story Moment

The plane has encountered a difficult obstacle
 when trying to get something it needs **Y**.



How does it see the situation? =

Root **Y** ~+ mature **X+** curious **O+** childlike
 Adjusted ~+ mature **X-** indifferent **O!** free spirited

How do others perceive it? #

Root **Y** ~+ generous **X+** responsible **O+** social
 Adjusted ~+ generous **X-** careless **O!** passionate

What does it do? &

Root **Y** ~+ collector **X+** diligent **O+** keeper
 Adjusted ~+ collector **X-** indifferent **O!** owner

Summary

This capable, yet hardened, powerful plane
 is like someone who is reasonably aware
 of everyone and everything around them
 and will try to get what they want
 regardless of consequences,
 but will move on if they fail.



In the story
 when confronted with a need for something
 they will battle ferociously to win it,
 knowing they may not succeed
 hence, they are not surprised if they lose.

Appearance and Naming

Appearance

How the plane looks
adds to its character.

It can be things like
sleek, broad, skinny, fat, long, short
colorful, drab, fancy, simple, flashy, plain
fresh, worn, young, old, straight, bent
red, yellow, blue, spotty, striped, checked
and so on.

It can be whatever catches
your eye, heart, and imagination.



Naming

The combination
of character, description, and history
can be captured in a name.

The name can be made from
notable qualities,
an exceptional event,
a traditional name with relevant meaning,
someone or something the plane brings to mind,
a new invention of interesting syllables.

Naming a plane you made and fly
keeps it beyond the life of paper and fold.

The name contains
what the plane was
what it is
and what it might be.



It is sad when the name is forgotten
for then the plane is truly no more.

An adventure
 is the stories of the flights
 through different spaces.
 It is the telling
 of how the plane interacts
 with the things it encounters.

Like a plane
 each thing can also have
 characteristics, appearance, and a name
 that we create
 based on its Qualities ~ X O.

Our plane might be (~- X+ O+)
 rigid, strong, capable.

We will name our plane “StarSeed”.

A wall is (~. X. O!)

unresponsive, immovable, and unyielding.

We will name the wall “Monolith”.

A tree is (~- X. O!)

intractable, rooted, and sturdy.

We will name the tree “Hydra”.

Another plane might be (~* X+ O+)

reactive, malleable, and flexible.

We will name this plane “DarkSpawn”.

Our flight log
 becomes our adventure story.

When a flight ends
 with our plane meeting another character
 we can consider the qualities of each
 and record the result of the encounter.



Adventure Example

Flight Log: StarSeed

Date: 2083.03.20

Location: Planet Earth

Distance: . - + * !

Duration: . - + * !



01) >* ^* (~'- X'+ O'+) Monolith

We flew straight and true
through the corridors of our Earth home.
Monolith came before us
bringing a sudden end.
Neither StarSeed or Monolith
suffered any serious damage.



02) >* ^* (~'+ X'- O'+) Hydra

Escaping Monolith
we continued at a good rate
when we encountered buffeting winds
leaving Earth's firm embrace
only to become entangled in Hydra's tentacles.
Again we fell
with no real harm done.



03) >- ^- (~'- X'! O'+) DarkSpawn

As we collected ourselves
after Hydra's attack
we spotted DarkSpawn
a short distance beyond
We made a swift direct flight
challenging the intruder.
DarkSpawn yielded
returning from whence he came.



When we fly we play
 we feast on discovery
 becoming what we eat.

To bite off what we can chew
 we focus
 defining goals, rules, and names.
 These are the elements of games
 useful tools
 to better our skill, understanding,
 and discover others.

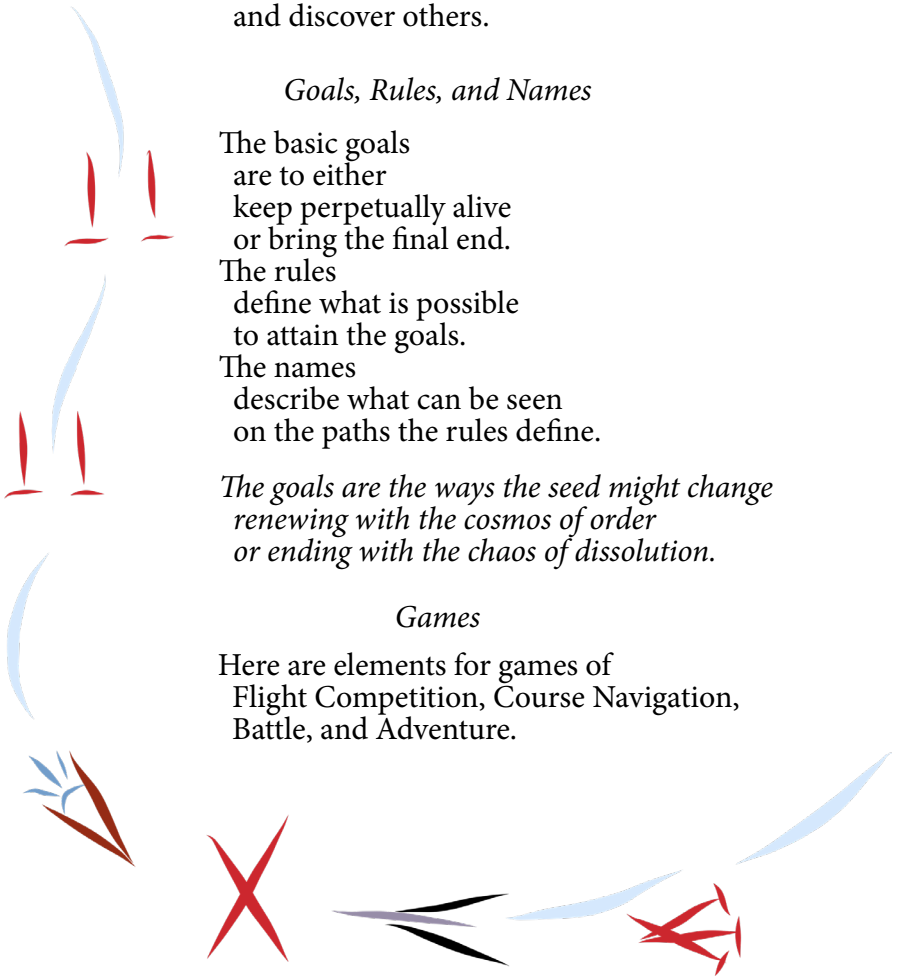
Goals, Rules, and Names

The basic goals
 are to either
 keep perpetually alive
 or bring the final end.
 The rules
 define what is possible
 to attain the goals.
 The names
 describe what can be seen
 on the paths the rules define.

*The goals are the ways the seed might change
 renewing with the cosmos of order
 or ending with the chaos of dissolution.*

Games

Here are elements for games of
 Flight Competition, Course Navigation,
 Battle, and Adventure.



Flight Competition - Distance and Duration

Goal

Flying to achieve

- 1) The longest distance $>$.
- 2) The longest duration/time aloft \wedge .

Rules


Each flight contestant

- Uses the same plane from start to finish.
- Launches from the same location.

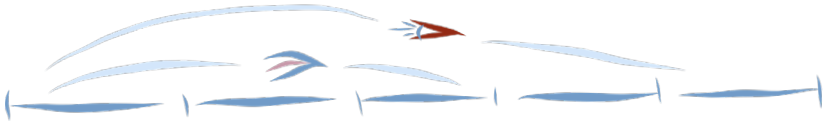
The **best** achievements are judged by single flight and overall average.

Examples

Plane #1 StarSeed 

Plane #2 WeepingCloud 

	Distance $>$ in Feet					
	1	2	3	4	5	Avg
#1)	100	115	80	135	99	105.8
#2)	140	98	30	70	104	88.4



	Duration \wedge in Seconds					
	1	2	3	4	5	Avg
#1)	07	10	09	15	12	10.6
#2)	12	15	22	17	15	16.2



Goals

Flying to achieve

- 1) The closest landing to a target marker.
- 2) The best number of landings inside a target area.
- 3) The best number of hits on a target.

You can use the prism blocks described at the end of the chapter as a target marker, to mark off a target area, and to build target towers that can be knocked down to show a “hit”.

Rules

Each flight contestant

- Uses the same plane from start to finish.
- Launches from the same location.

The **best** achievements are judged by single flight and overall average.

Examples

Plane #1 SunStorm 
Plane #2 InfiniteBlue 

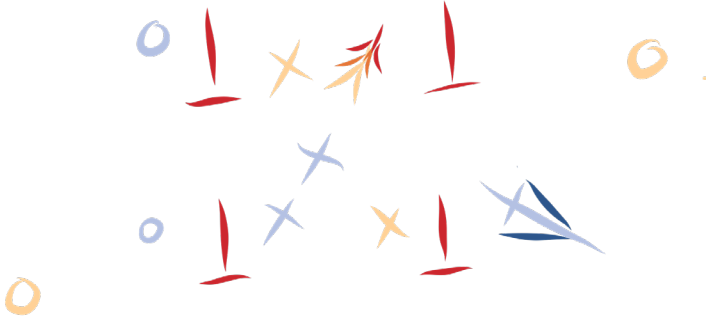
	Distance from Target in Feet					
	1	2	3	4	5	Avg
#1)	05	01	10	08	03	5.4
#2)	05	05	00	06	04	4.0



Flight Competition - Accuracy Examples

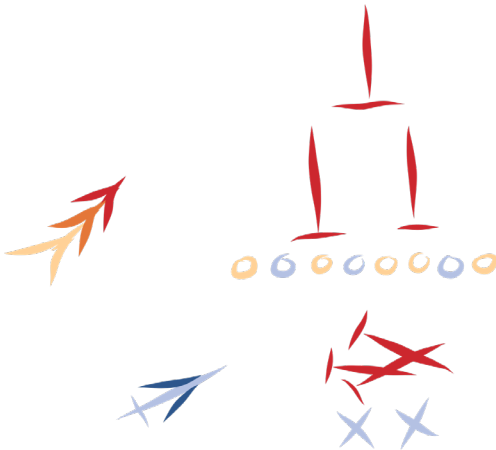
Landings within Target Area

	1	2	3	4	5	Tot
#1)	X	-	-	X	X	03
#2)	X	-	X	-	-	02



Hits on Target

	1	2	3	4	5	Tot
#1)	-	-	X	-	X	02
#2)	-	-	-	-	-	00



Goals

Flying to achieve

- 1) A specific specific maneuver.
- 2) An interesting flight.

Rules

Each flight contestant

- Uses the same plane from start fo finish.
- Launches from the same location.

The **best** achievements are judged by how well the specific maneuver was made or how interesting the judges found the flight.

Examples

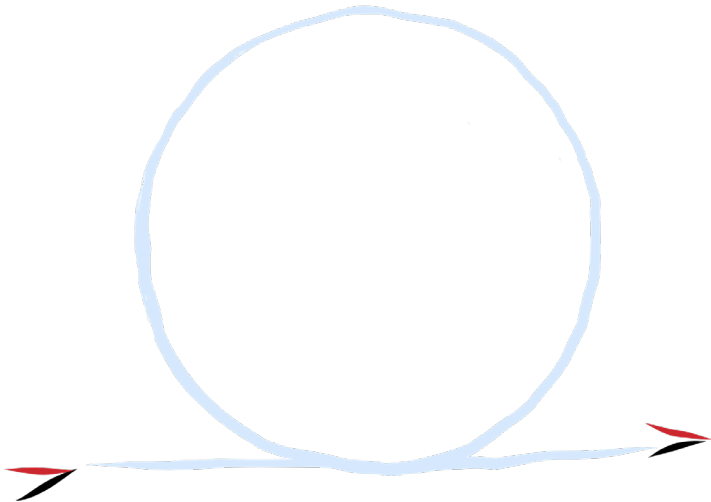
Plane #1 QuietNight



Plane #2 ThistleDown

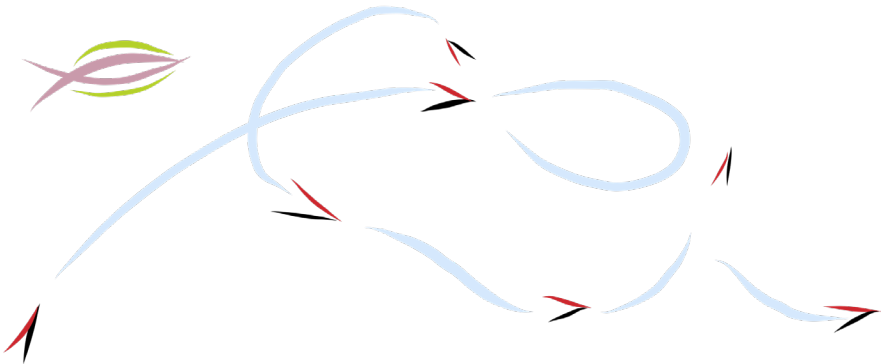
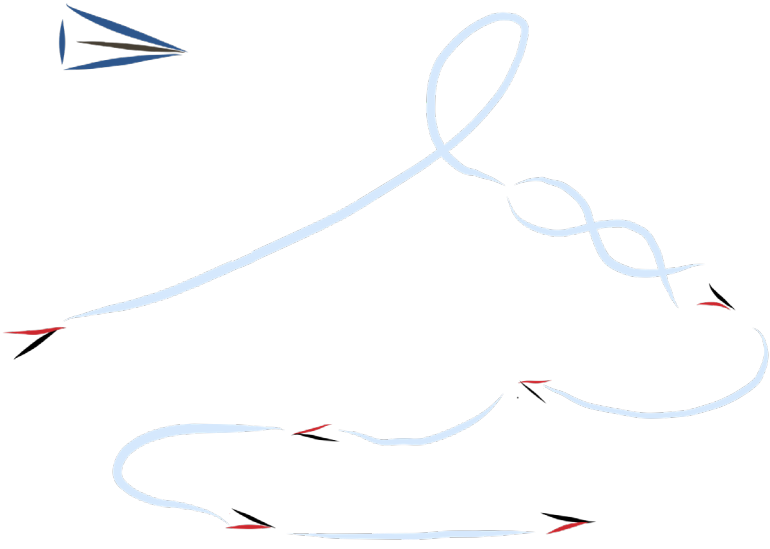
*Excellence of Maneuver*

	1	2	3	4	5	Avg
#1)	.	*	+	+	+	+
#2)	+	!	+	-	*	*



Flight Competition - Acrobatics Examples

	Interest of Flight					
	1	2	3	4	5	Avg
#1)	.	*	+	+	+	+
#2)	+	!	+	!	*	!



Goals

Fly to follow and complete a course
launching as few times as possible.

Rules

To complete the course each contestant must

- 1) Start the course from the same location.
- 2) Pass through each course marking gate in the correct direction.
- 3) Finish the course by successfully reaching a target.

Course gates and targets may be marked with prism blocks described at the end of this chapter.

Examples

Plane #1 BrokenWing



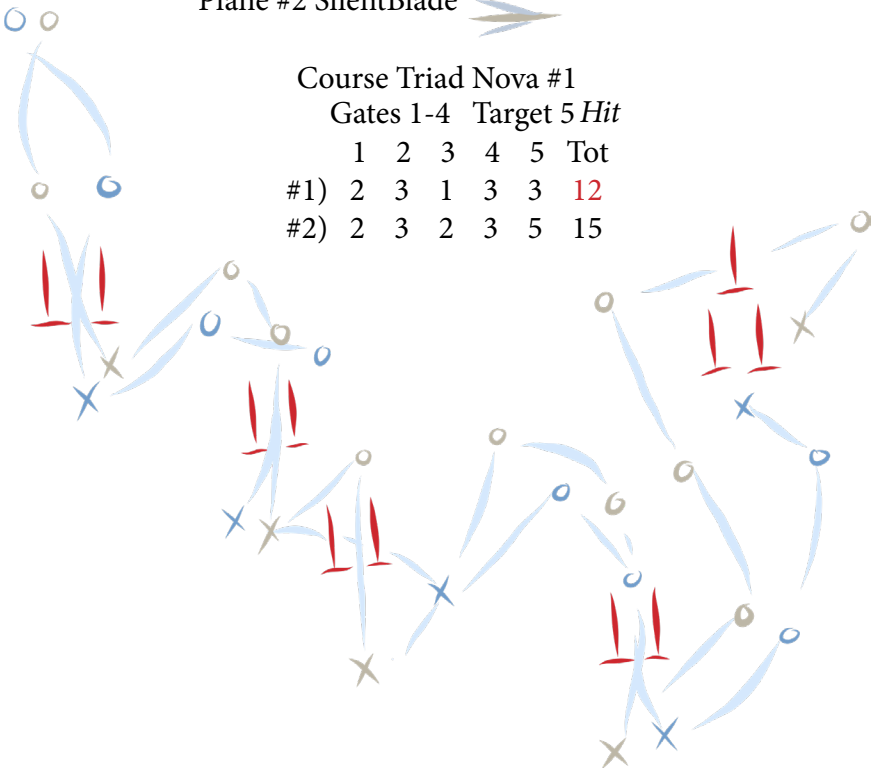
Plane #2 SilentBlade



Course Triad Nova #1

Gates 1-4 Target 5 Hit

	1	2	3	4	5	Tot
#1)	2	3	1	3	3	12
#2)	2	3	2	3	5	15

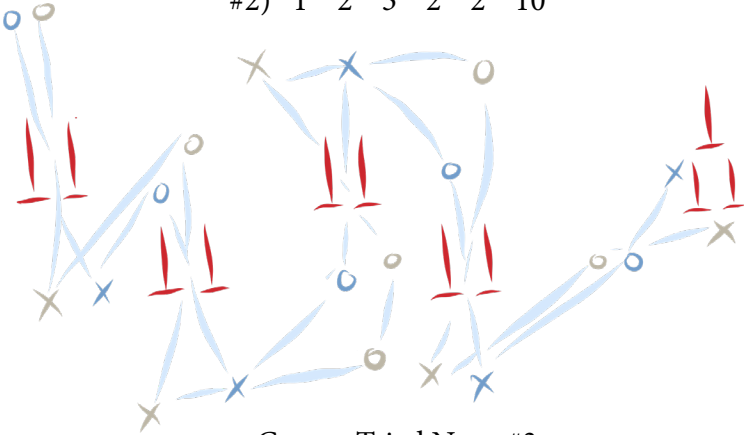


Course Navigation Examples

Course Triad Nova #2

Gates 1-4 Target 5 *Hit*

	1	2	3	4	5	Tot
#1)	1	2	2	2	2	9
#2)	1	2	3	2	2	10

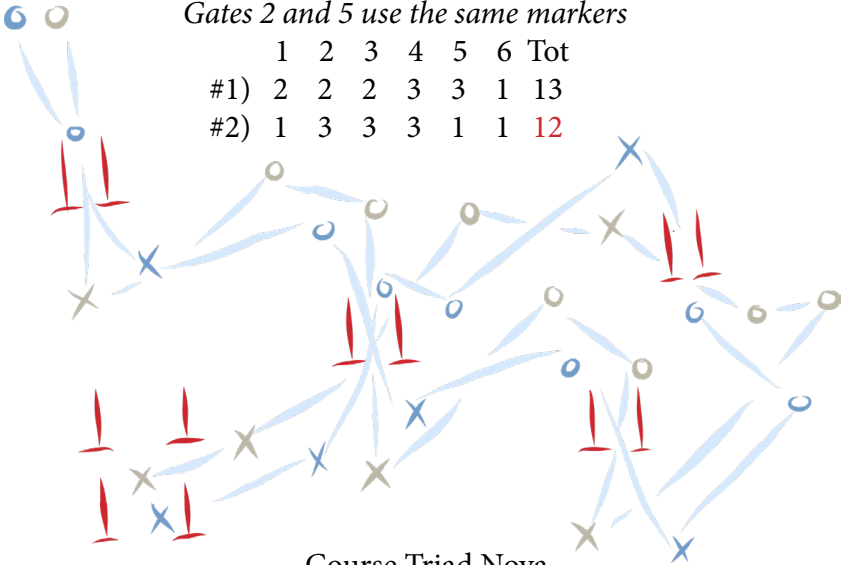


Course Triad Nova #3

Gates 1-5 Target 6 *Landing*

Gates 2 and 5 use the same markers

	1	2	3	4	5	6	Tot
#1)	2	2	2	3	3	1	13
#2)	1	3	3	3	1	1	12



Course Triad Nova


Totals


	1	2	3	Tot
#1)	12	9	13	34
#2)	15	10	12	37

Goals

Compete to determine
winning, losing, and consequences.

Rules

- 1) Competition begins when a plane lands
an agreed upon distance from an opponent.
Three feet is a good standard.
- 2) The attacker wins without a battle
if the plane lands striking the opponent.
- 3) Otherwise, the landing plane decides
whether to attack.
- 4) To battle
each player makes a fist.
Players then move their fists in unison
simultaneously striking a flat surface three times
counting aloud with each strike.
On the third strike
the players keep their fist closed
or extend their thumb. 

The attacking player wins the battle
if both are fists or thumbs. 

The defender wins
if one is a fist and the other a thumb.
- 5) The defender must always take flight
either as a consequence of losing
or acting in a successful defense.

Consequences depend on the game.

In a flight battle competition

each victory is recorded

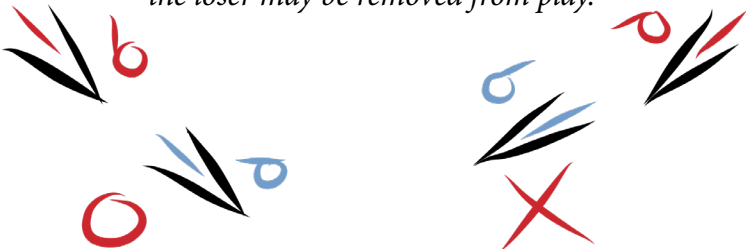
the player with the most victories wins.

If a course competition

the loser must return to a previous position.

In an adventure

the loser may be removed from play.



Battle - Prizefight

Goals

Compete to determine
the owner of a space and its contents.

Rules

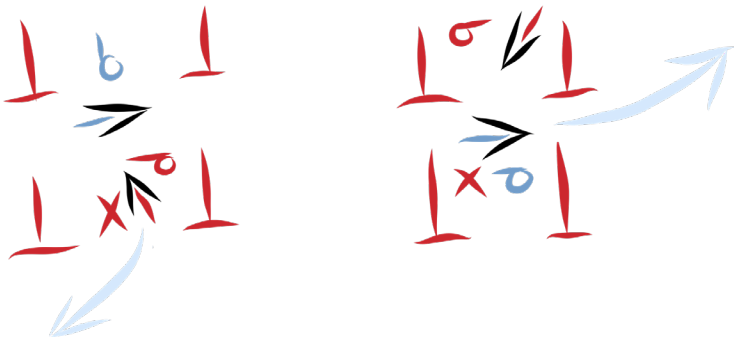
- 1) Mark off a space
using prism blocks or other means.
A 3'x 3' space is a good standard.
- 2) A space is owned by a player
who has the only plane within it.
- 3) Competition starts
when an opposing plane
lands within the space.
- 4) Players then follow
the previously described rules for battle.
- 5) The loser of the battle must take flight
landing at least the space's width
from its borders.

Also, they may not re-enter the space
for at least one turn.

*If a dogfight occurs
with a space owner
and an attacker outside the space
the owner may stay put in the space
with a successful defense.*

*If the owner loses
they must leave the space
as a consequence.*

The space then becomes unowned.



Goals

Combine the activities and games
to create adventures
playing alone or as teams
cooperatively or competitively
with a variety of planes and personalities
exploring, discovering, battling,
knowing victory and defeat,
pursuing an ultimate goal
telling an epic story.

Rules

- 1) Prepare a plan
describing challenges to be encountered
on the way to the great goal.
- 2) Make planes with personalities
to join the quest.
- 3) Create teams
deciding whether the play will be
cooperative or competitive.
- 4) Place planes in spaces
owned at the adventure's start.
- 5) Play with alternating turns
starting with a battle for who goes first.

Example

Quest for a New Home

Team #1

BlackStar

AmazingGrace

FireBall



Team #2

TrueBlue

WoundedHeart

SilentKnight



Ultimate Adventure Example

1) Course of Battle

The course is five 2' wide gates.
The consequence of defeat in battle
is returning to the preceding gate.
There were three battles.

FireBall#1 defeated TrueBlue#2

WoundedHeart#2 defeated BlackStar#1

FireBall#1 defeated SilentKnight#2

Order of finish



2) Battle with Chaos

The plane Chaos battles with coin flips,
heads is a fist and tails is a thumb.
Players first choose thumbs up or down
then the coin is flipped for Chaos' response.
Players must win 2 of 3.

The consequence of defeat is elimination.



3) Final Conquest

The course is four 2' gates
ending with a 3' x 3' target area.

The consequence of defeat in battle is elimination.
The adventure champion must hold
the target area for two consecutive turns.



AmazingGrace found a new home.

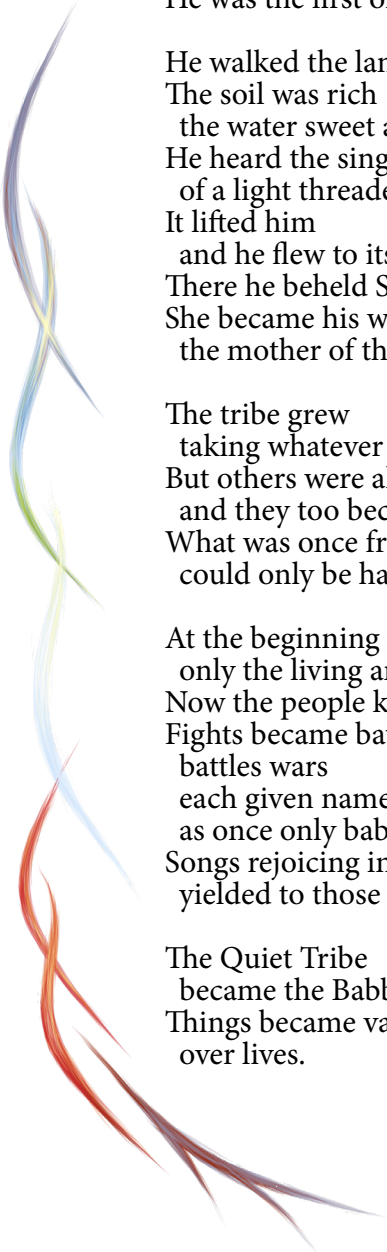
The sun's wave
broke upon the earth.
Upon its crest
rode Falling Star.
He was the first of his people.

He walked the land.
The soil was rich
the water sweet and plentiful.
He heard the singing
of a light threaded stream.
It lifted him
and he flew to its source.
There he beheld Shining Dove.
She became his wife
the mother of the Quiet Tribe.

The tribe grew
taking whatever they saw and desired.
But others were also cast upon the earth
and they too became many.
What was once free
could only be had by taking from another.

At the beginning
only the living and life-giving were named.
Now the people knew the words of killing.
Fights became battles
battles wars
each given names
as once only babies were christened.
Songs rejoicing in new life
yielded to those glorying in a foe's death.

The Quiet Tribe
became the Babbling Destroyer.
Things became valued
over lives.



Adventure Story

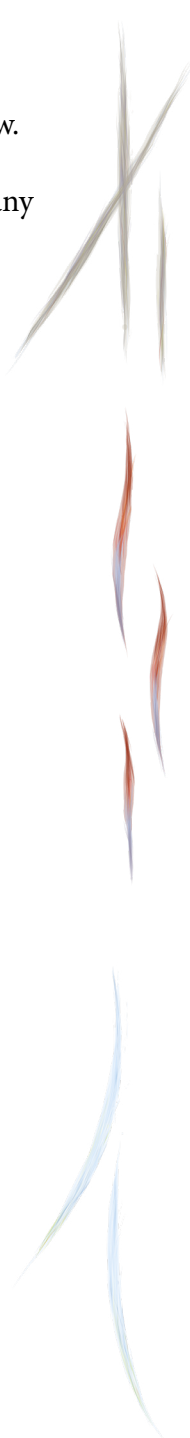
The Mother and Father wept
washed away by the river of tears
to the flowered land beyond sorrow.

Words became meaningless and many
filling the skies with empty air.
Their polluted clouds hid the sun
and suffocated the living.

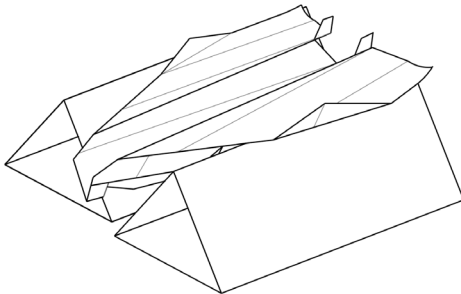
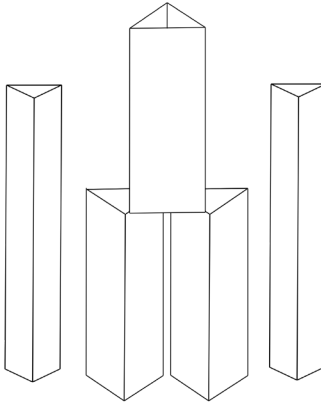
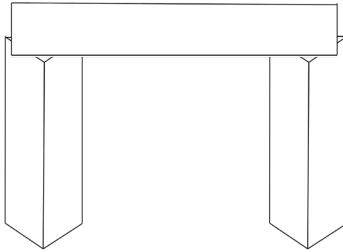
Yet the poisons could not kill all.
A few endured
to learn of deeper things.
The brave sacrifice
so another might live.
The starlight of mercy
amidst the dreadful night.
The forgiving of grievous wounds.
And so, the seed awoke
to become as it should be.

A new word emerged
that is above all others
but few know its true meaning.
Those who do
bear the shining fruit
walking the forever path
ascending beyond the stars.

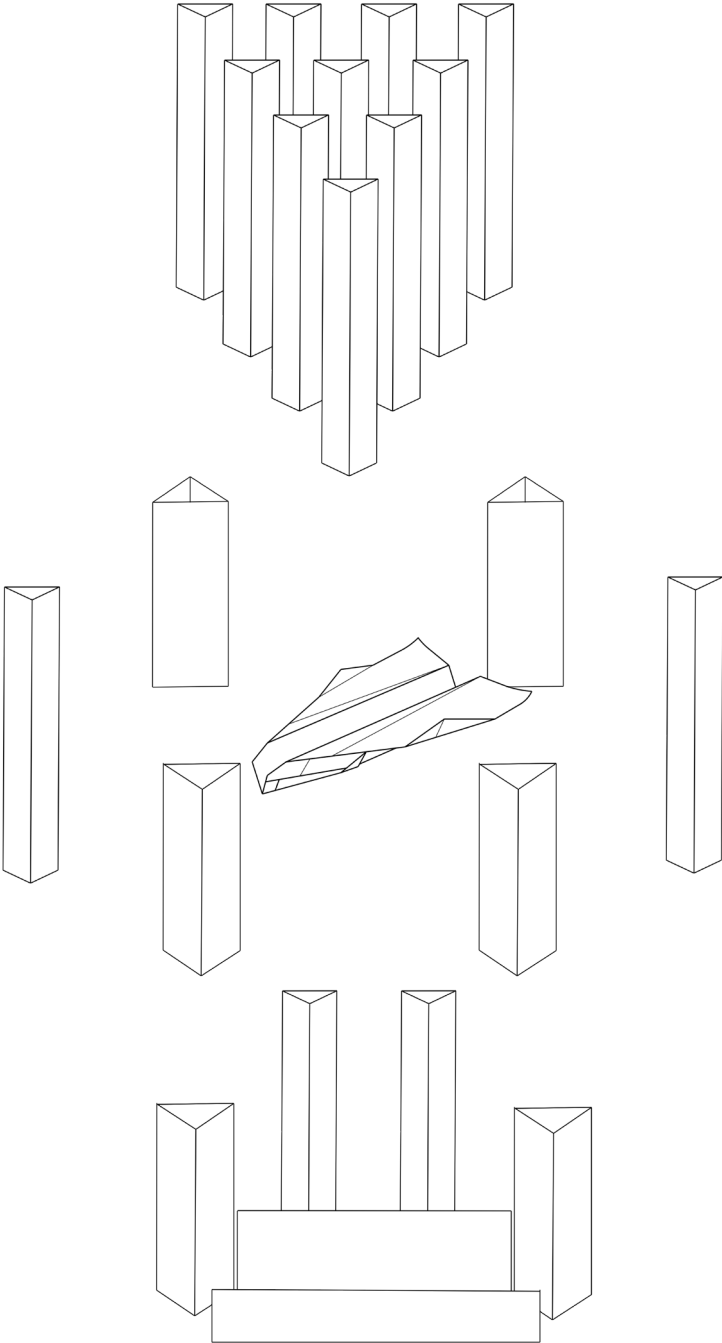
This is the time of adventure
the striving of life to live.
Cowards, heroes, villains, saints,
the sad now, the hopeful then.
Countless stories with endings
that have yet to come to an end.



These triangular blocks made from the same paper as the planes can be used as pillars and beams to build courses, targets, and other structures useful in gaming and other activities.

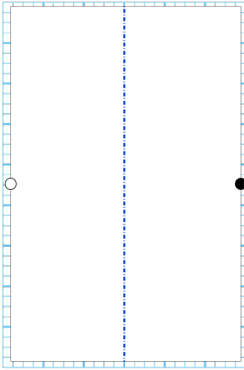


Prism Blocks



Prism Blocks Tall and Slender

01



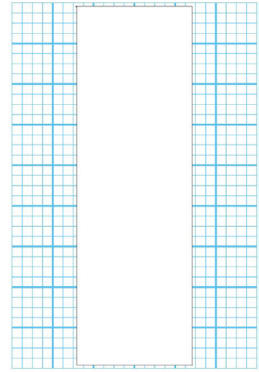
Fold the paper in half.

Use a 5.5" x 8.5" sheet of paper.

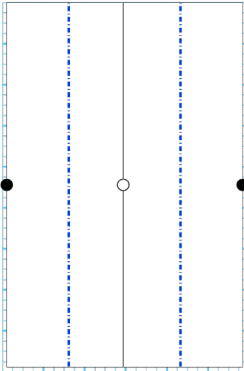
Match the corners and edges.

Crease sharply.

Unfold.



02



Fold the paper into quarters.

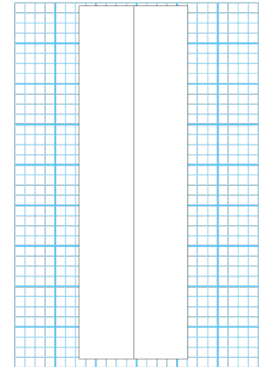
Match the right edge with center fold.

Crease sharply.

Match the left edge with center fold

Crease sharply.

Unfold.

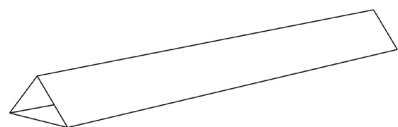
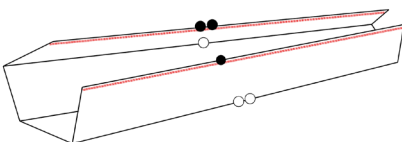


03

Form prism block.

Lightly glue long edges.

Form the block by layering the two end panels together one beneath the other.



Prism Blocks Short and Stout

01

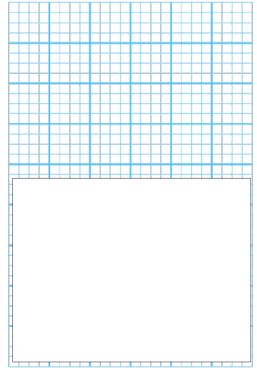
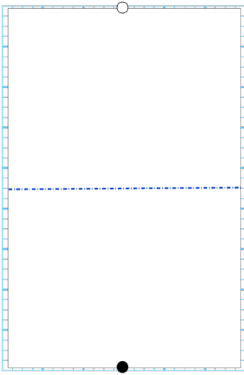
Fold the paper in half
by width.

*Use a 5.5" x 8.5"
sheet of paper.*

*Match the corners
and edges.*

Crease sharply.

Unfold.



02

Fold the paper into quarters.

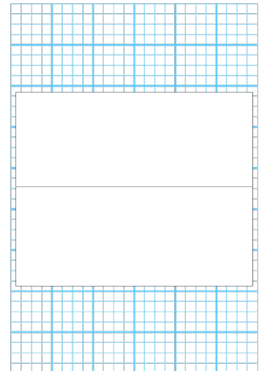
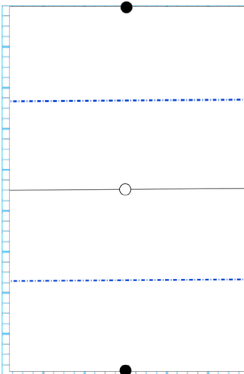
*Match the top edge
with center fold.*

Crease sharply.

*Match the bottom edge
with center fold*

Crease sharply.

Unfold.



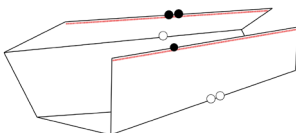
03

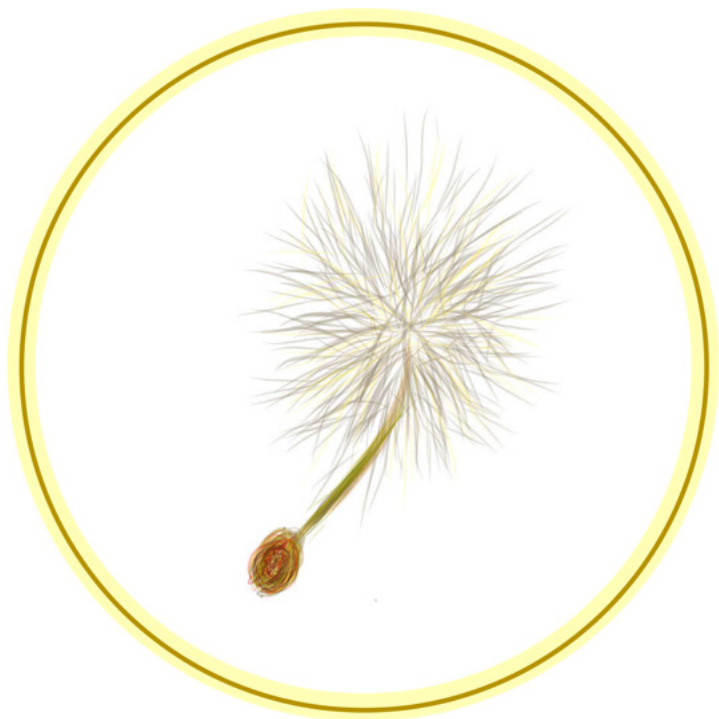
Form prism block.

*Lightly **glue** long edges.*

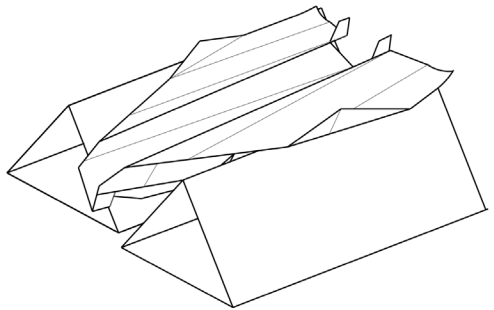
Form the block

*by layering the two end panels together
one beneath the other.*





Making Keeping Releasing



Each seed
contains the all
completes the whole.

Each fold
shapes the body
yielding the life
to become the flight.

What is taken
comes from what is given.

The winds
have the final say.

Even when the greatest care fails
there will be a sprout.

Begin, end,
then, now, next
each fleeting
each enduring.



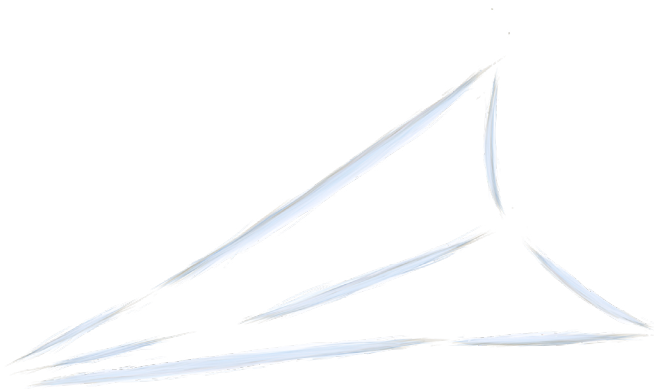
Humble Best

The sown seed's awaking
is a wonderful beginning
but it needs constant tending
to become what it was made to be.

A plane is best made
with folding and cutting
that is symmetrical and strong.
It is best kept
with thoughtful care.

Here are ways
to make the most of your effort
reducing the possible
revealing the effective.

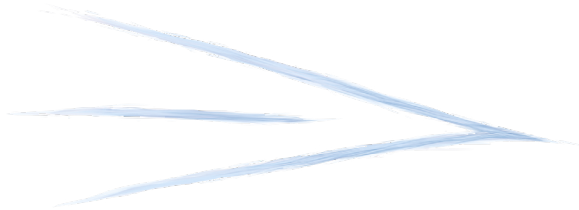
Keep the best
let go of the rest.



The plane is a growing sprout
emerging in its making.

Principles

- 1) Start in quiet
on a smooth hard surface
with contrasting color
to help sense, feel, and see
the changes you create.
- 2) Keep things simple
so what you have done
you can do again.
- 3) Be careful
since one change changes all.
- 4) Be clear
defining guide points
to better establish the goals
and be more aware of your actions.
- 5) Record and recall the best
of what you discover
to join the then
with the now
and make the most
of each moment.

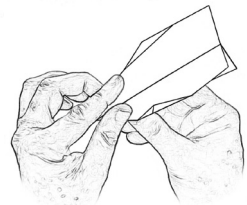
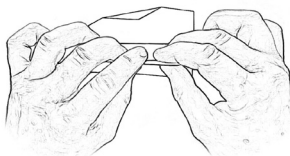
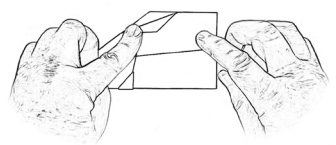
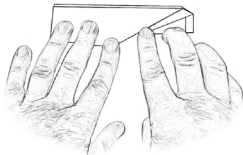
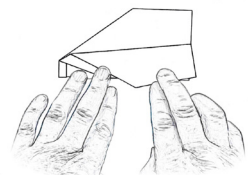
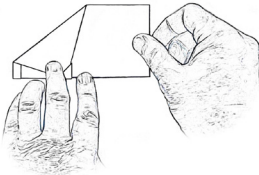
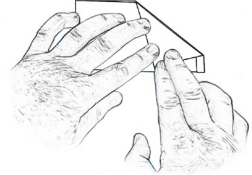
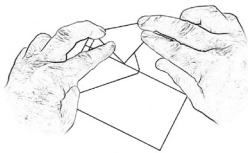
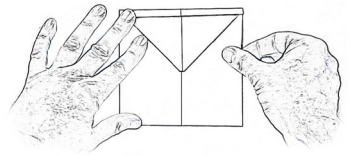
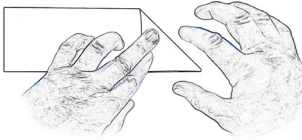
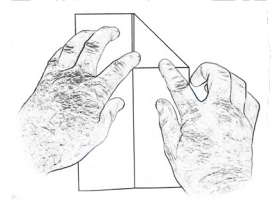
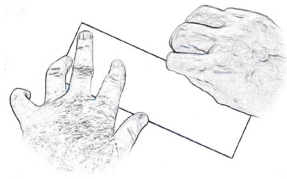


Making Example

Use creases and edges to clarify and guide folding.

Move the plane so it is easier to fold.

Align with the opposite fold to improve symmetry.



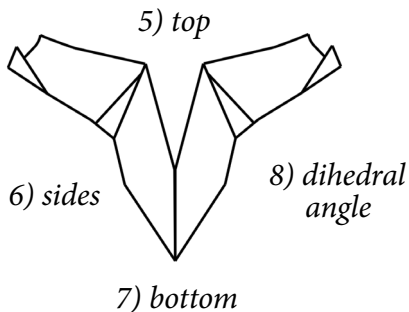
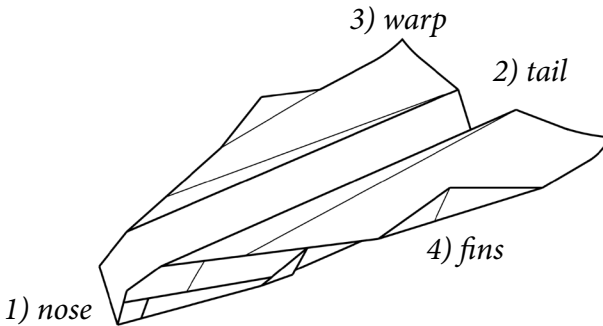
The plane is a living seed
constantly changing.

Storing, handling, launching, landing,
humidity, gravity, and wind
all stress the plane
diminishing its capability.

It takes work to keep the plane in flying trim.

Staying Trim

- 1) Inspect the plane before each flight.
Follow a checklist to ensure symmetry.
Gently refresh folds
to correct for undesired change.



Expect to refold the plane before most flights.

Keeping

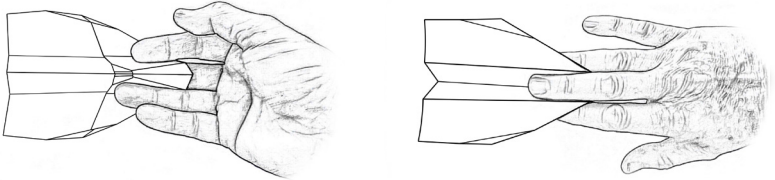
2) Hold and carry the plane to keep its shape.

Do not hold it by its wings
since they easily bend.

Instead

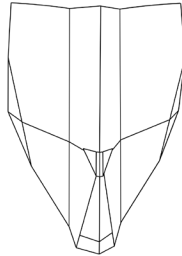
hold it at its strongest point
gripping each side of the nose.

Holding is like folding
so try to keep the plane's symmetry
in your handling.

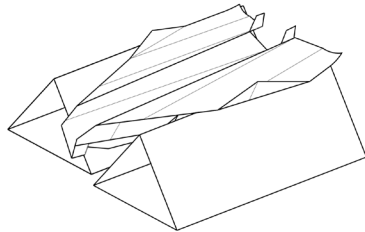


3) Store the plane to keep its shape.

Lay it on its back.



Make a prism block storage cradle.



*Folded paper loses its shape when exposed to moisture.
Hence keep the plane dry in low humidity.
Using a box with desiccant is a good option.*

All things have their time
even the very best must end.

Sooner or later
the plane will lose its shape
in a way that cannot be corrected.

Along with crashing and smashing
the paper and folds will weaken
and become unable to hold their form.

The plane has done
what it was made to do
but when it fails to be a plane
it's time to start anew.

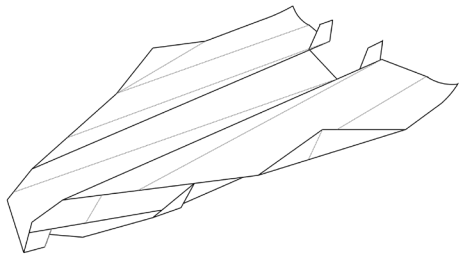
There can always be another.
Its essence
what it is and is not
is in the maker's hand.

With fresh paper
and a little time
the seed will sprout
the adventure renew.





The Shooting Star

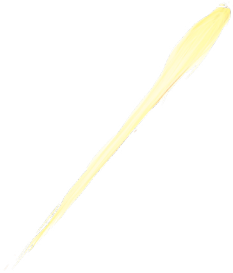


Amidst the fires
of warring day and night
a blazing streak
a roaring flame.
Burning battle red
passes to ashen cloud
celestial choruses rumble
echoing endless beginning.

The threshold crossed
the barrier broken
far and near lose meaning.

Heaven and earth join
yielding the eternal.

Ascend
to fall
to rise again.



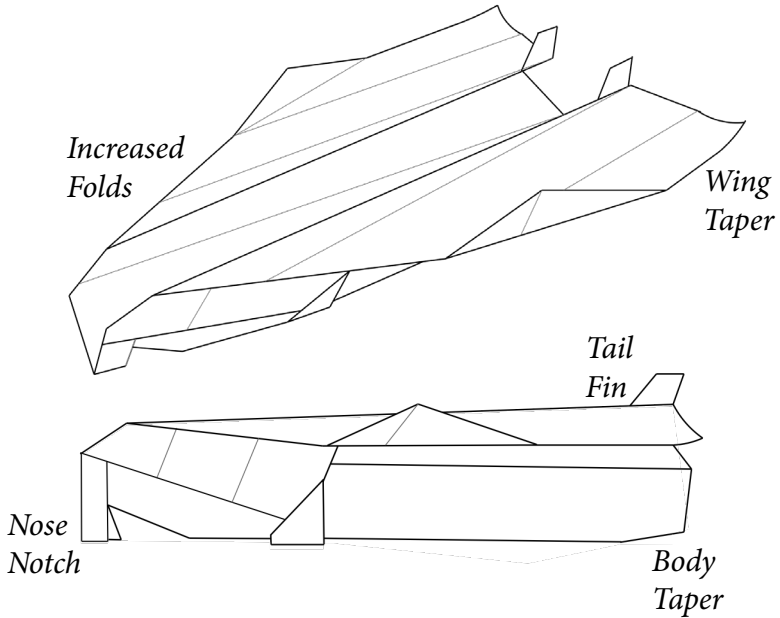
We have planted, sprouted, and grown.
Now to mature,
refining our work
to be more than before.

One change
changes the whole.
Adding to one thing
subtracts from another
which alters something else.
Things are complex
and often unexpected.
We need hold true
to the discipline of the seed
enduring
making the most of our effort.

Quiet, trusting, and discerning
we will take another step higher.



The Shooting Star is designed to be more stable amidst stronger forces encountered during the flight.



Increased Number of Folds
Provides extra guide lines
and improves surface shape durability.

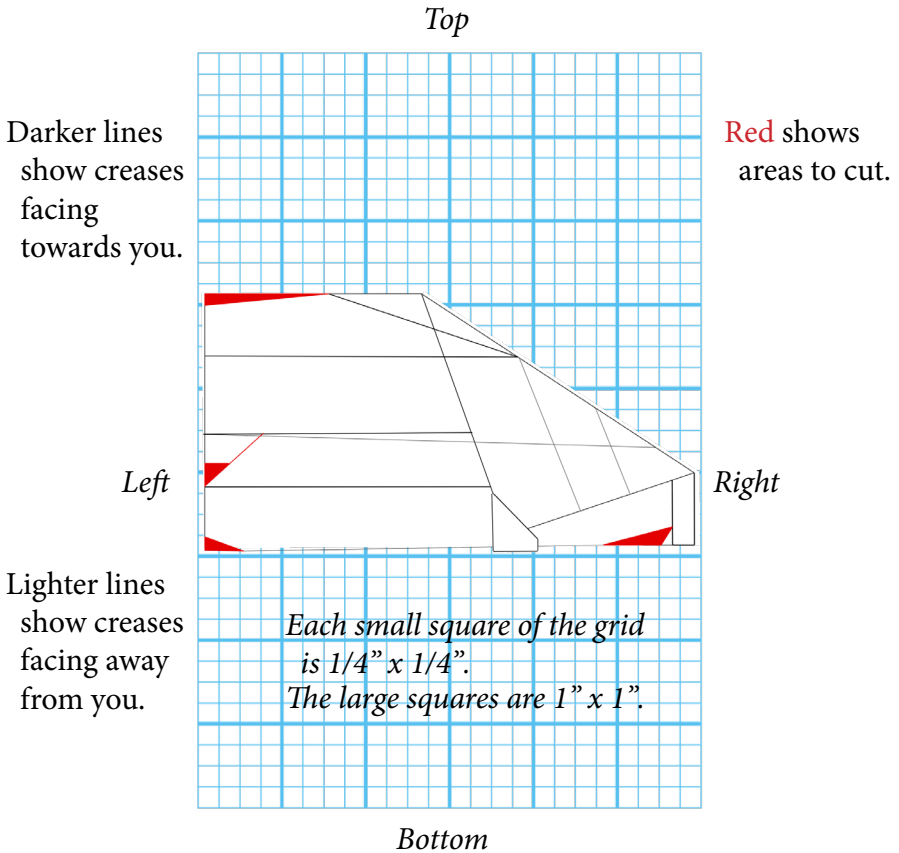
Wing Taper
Improves high speed launch stability.

Tail Fin
Improves flight stability
and interactions with wind.

Nose Notch
Enables catapult launching.

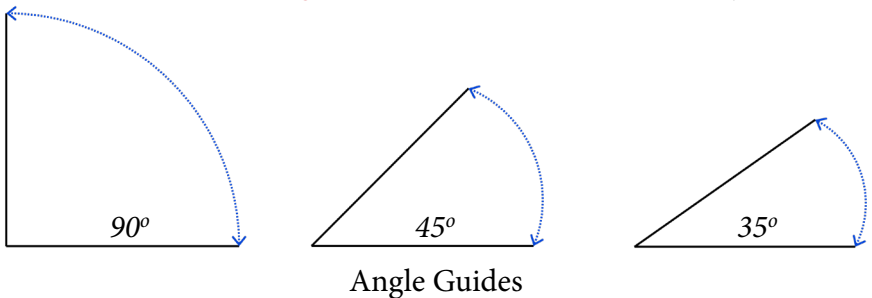
Body Taper
Enhances launch and flight stability.
*It is also useful when gently warped
to correct unwanted yaw.*

Shooting Star Design Key

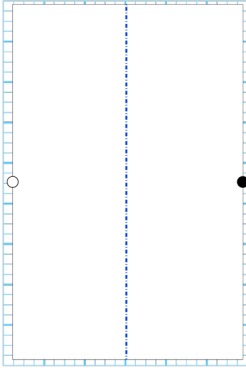


Use a 5.5" x 8.5" sheet of paper.
This is half of a standard 8.5" x 11" sheet.

Folds will vary with each plane
as will measures of inches and degrees.
These are *guides* and do not have to be exactly met.



01



Fold the paper in half.

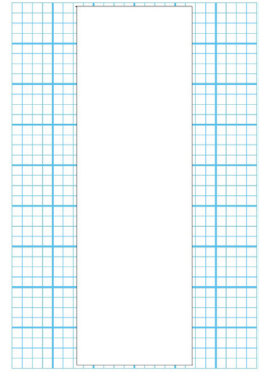
Use a 5.5" x 8.5" sheet of paper.

● Match the corners and edges.

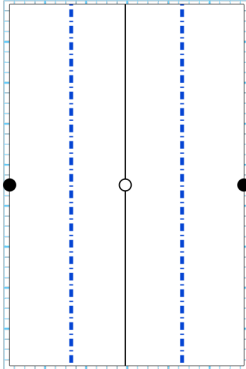
Crease sharply.

Unfold.

Flip paper over.



02



Fold the paper into quarters.

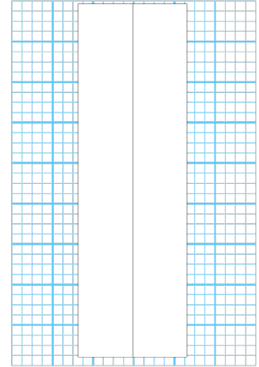
Match the right edge with center fold.

● Crease sharply.

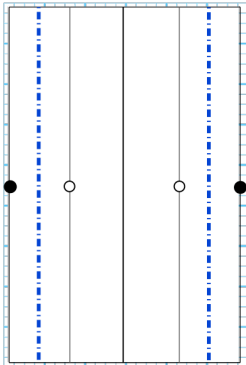
Match the left edge with center fold

Crease sharply.

Unfold.



03

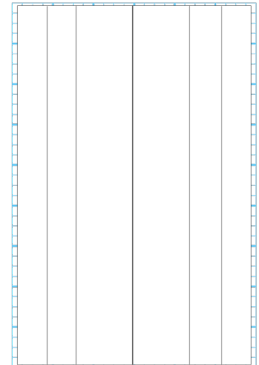


Fold the paper into six sections.

Match the edges with the quarter folds.

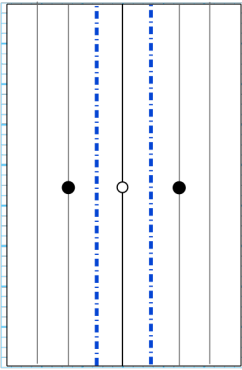
● Crease sharply.

Unfold.



Shooting Star Design

04



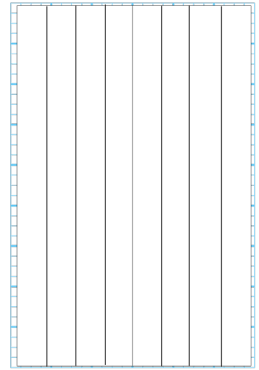
Fold the paper into eighths.

*Match the quarter folds
with the center fold.*

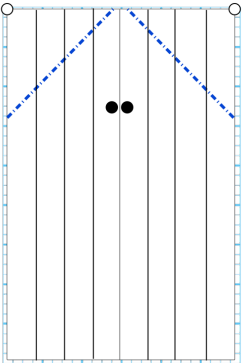
Crease sharply.

Unfold.

Flip paper over.



05



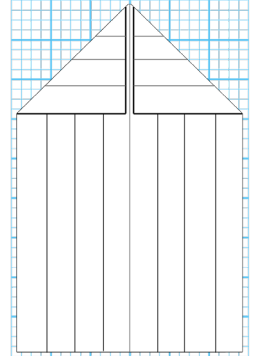
Fold the top corners down.

*Match the right edge
just short of the center fold.*

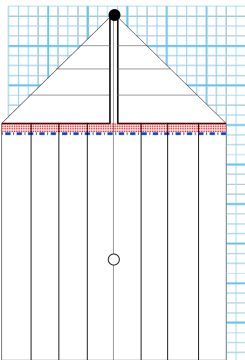
Crease sharply.

*Match the left edge
just short of the center fold.*

Crease sharply.



06

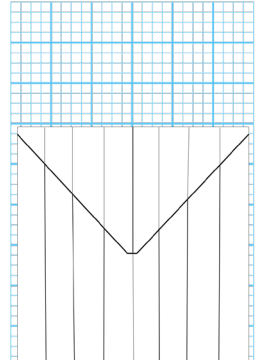


Fold down the top triangle
at the Nose.

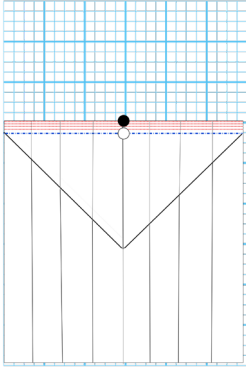
*The crease should be 1/4"
below the triangle's base.*

Match the folds.

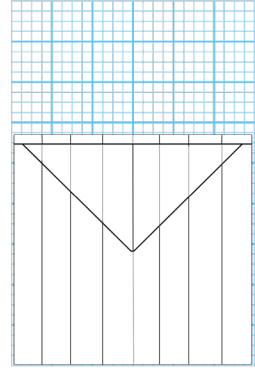
Crease sharply.



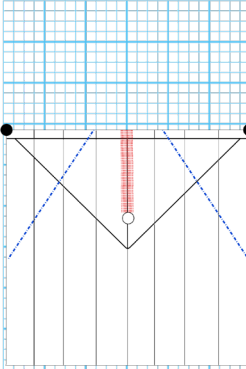
07



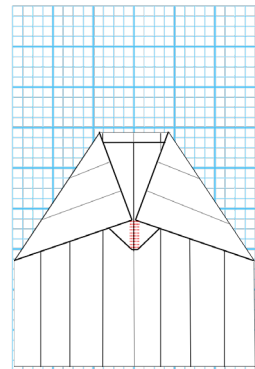
Fold the edge
 $\frac{1}{4}$ " from the top.
Match the folds.
Crease sharply.



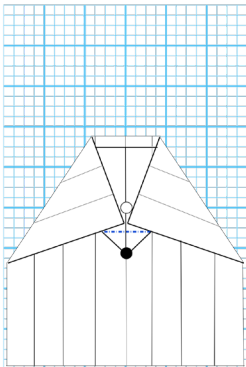
08



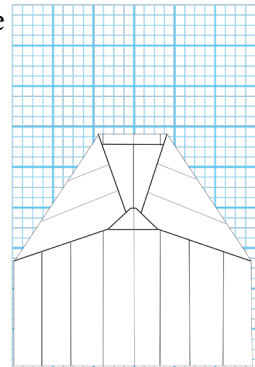
Fold down the corners
to touch 2 " from the top.
*Meet the right corner
with the center fold.*
Crease sharply.
Meet left corner with center.
Crease sharply.
*The small triangle tip
should be $\frac{3}{4}$ "
from the corners.*



09



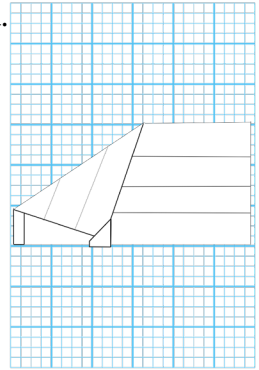
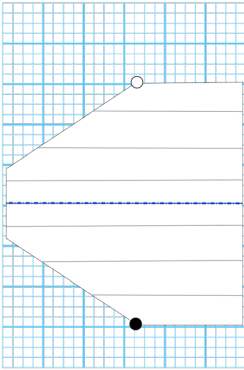
Fold the small triangle staple
toward the top.
Match the folds.
*Crease sharply to the edges
to hold the large triangles
against the body.*
Rotate 90° to the left.
Flip over.



Shooting Star Design

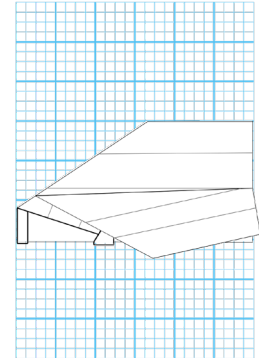
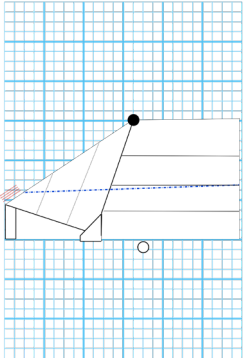
10

Fold in half at the center fold.

*Match edges.**Crease sharply.*

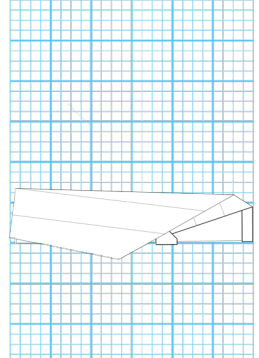
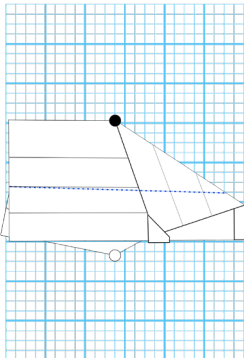
11

Fold the right wing.

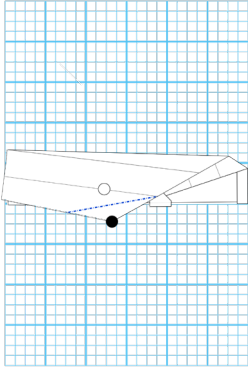
*The corner should be about 1/4" below the body's edge.**The crease should start about 1/2" from the nose finishing at the tail fold.**Align the fold.**Crease sharply.**Flip over to the right.*

12

Fold the left wing.

*Match the corners and edges with the right wing.**Crease sharply.*

13

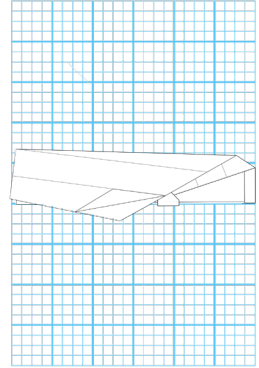


Fold the left wing fin.

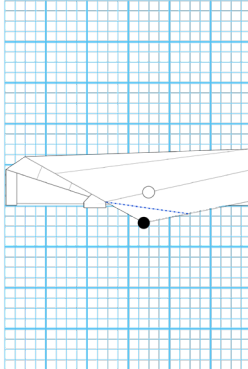
*Align the fold
with the paper edge
meeting the wing fold.*

Crease sharply.

Flip over and to the left.



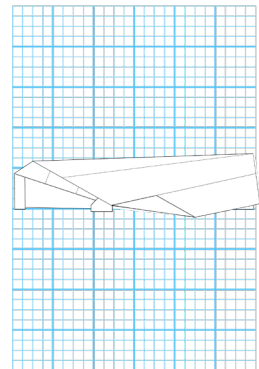
14



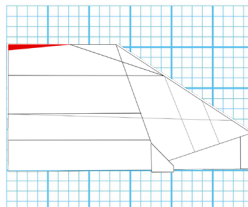
Fold the right wing fin.

*Align the fold
with the paper edge
meeting the wing fold.*

Crease sharply.



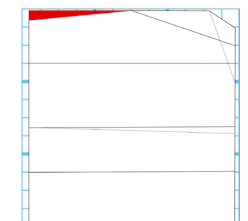
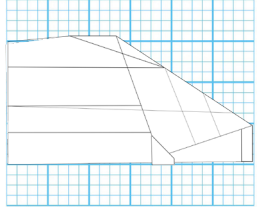
15



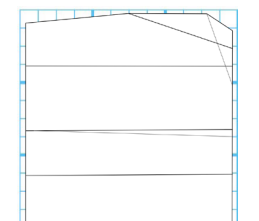
Taper the wings.

*Flatten the paper
to cut both wings
with the same cut.*

*Trim off the area shown
in red.*



*The cut starts 1/8" from the
top of the wings
and ends
at the wing fin fold.*

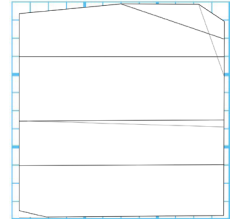
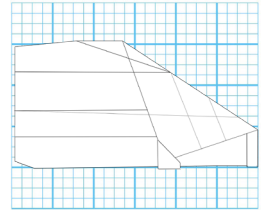
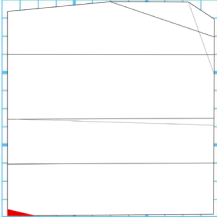
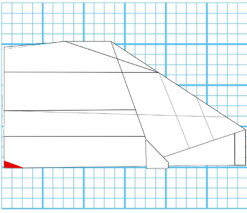


Shooting Star Design

16

Taper the body.

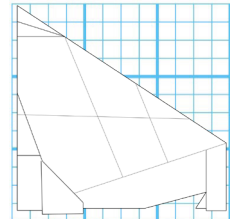
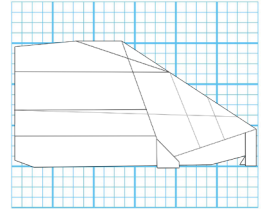
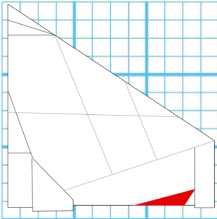
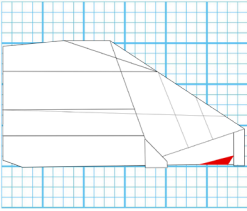
*The cut is 1/8" high
and 1/2" long.*



17

Create nose notch.

*The cut is 1/4" high
and 5/8" long.*

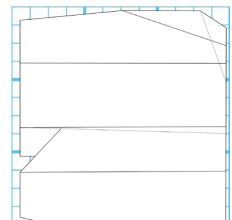
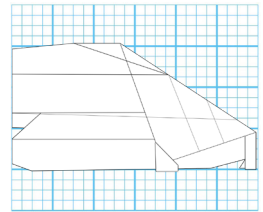
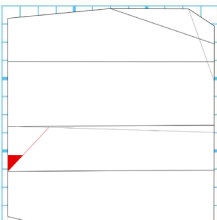
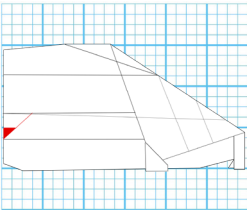


18

Create tail fins.

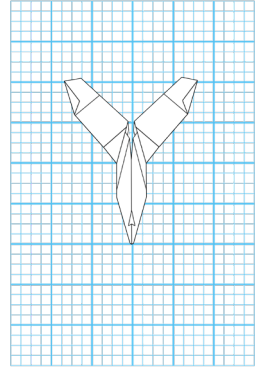
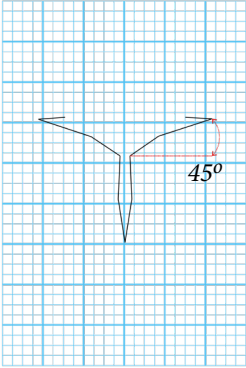
*The diagonal cut
is 7/8" long.*

*The cutout is 1/4" high
and 1/4" long.*



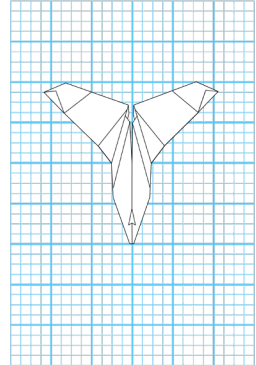
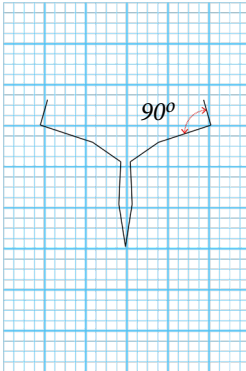
19

Form wings.
*Raise the wings
45° at the body.*



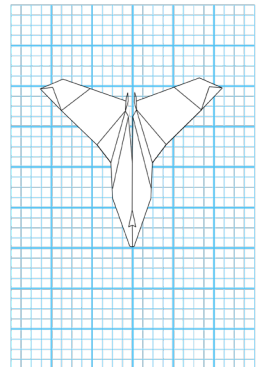
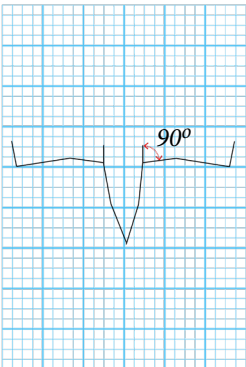
20

Form wing fins.
*Raise the wing fins
90° at the wing.*



21

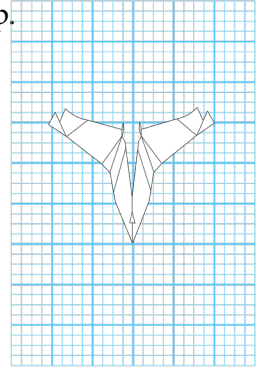
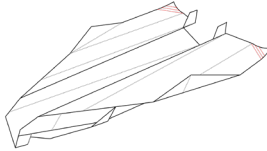
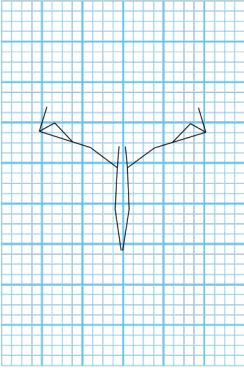
Form the tail fins.
*Raise the tail fins
90° at the wing.*



Shooting Star Design

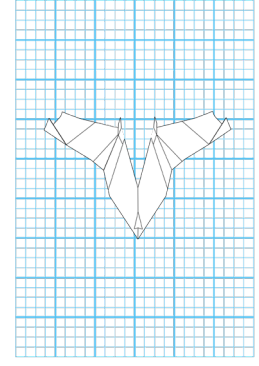
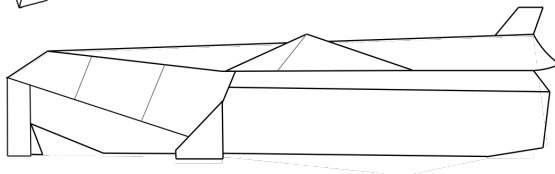
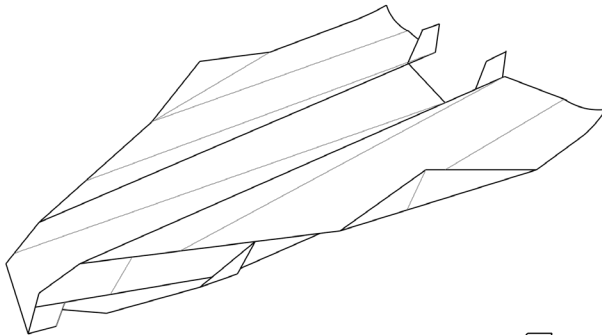
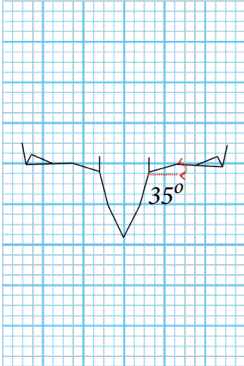
22

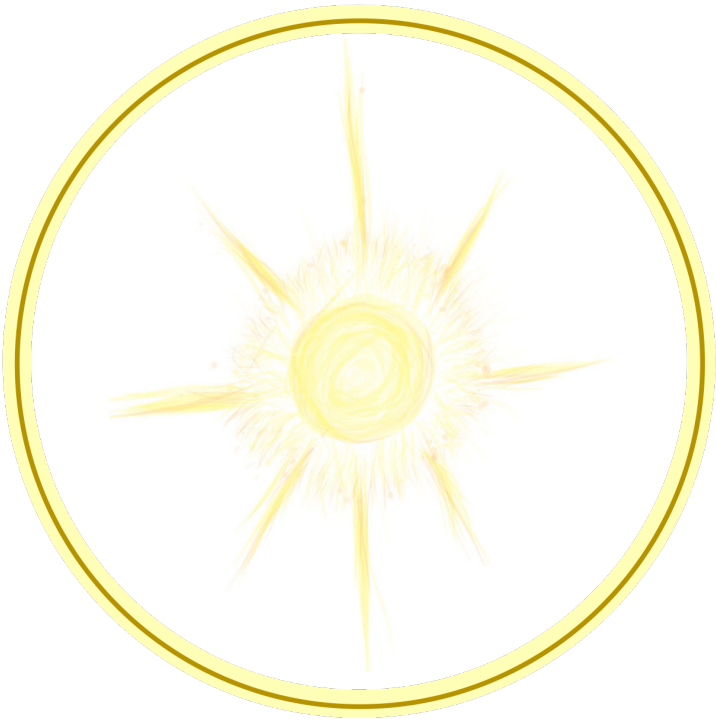
Form the tail edge wing warp.

*Bend the wing corners upward 35°.**The bend should start 1/2" from the tail edge of the wing.*

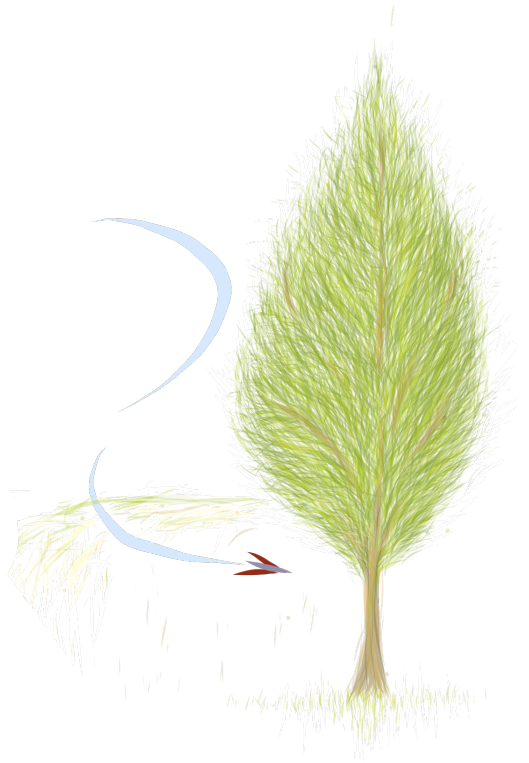
23

Finish body.

*Gently pull the body at the wings to spread and flatten.**The wings meet the body at 35°.*



Air Earth Launch Glide



Fiery star
paper seed
ascending
through space and time
sharing the course
bound by the same rules
to emerge and abide
infinite now
endless then.

They strive to make
the most of each part
each instant a glimpse
of how and why.

The fleeting beyond
the cosmic thrill
the forever pursuit
of the whole
and the all.



Gaming the Wind

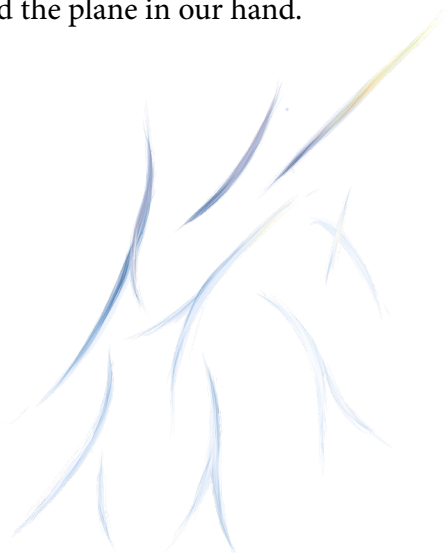
Flying outside
we play with sun, earth, and air
we game with the wind.

The launch
is the last moment of our control
then the transition
then the glide.

The air pushes
the planet pulls.
The design
is part of the story.
The wind
is the ultimate master.

Understanding each
helps us find what we seek.

Embracing the trouble
we do the best we can do
with the conditions of the day
and the plane in our hand.



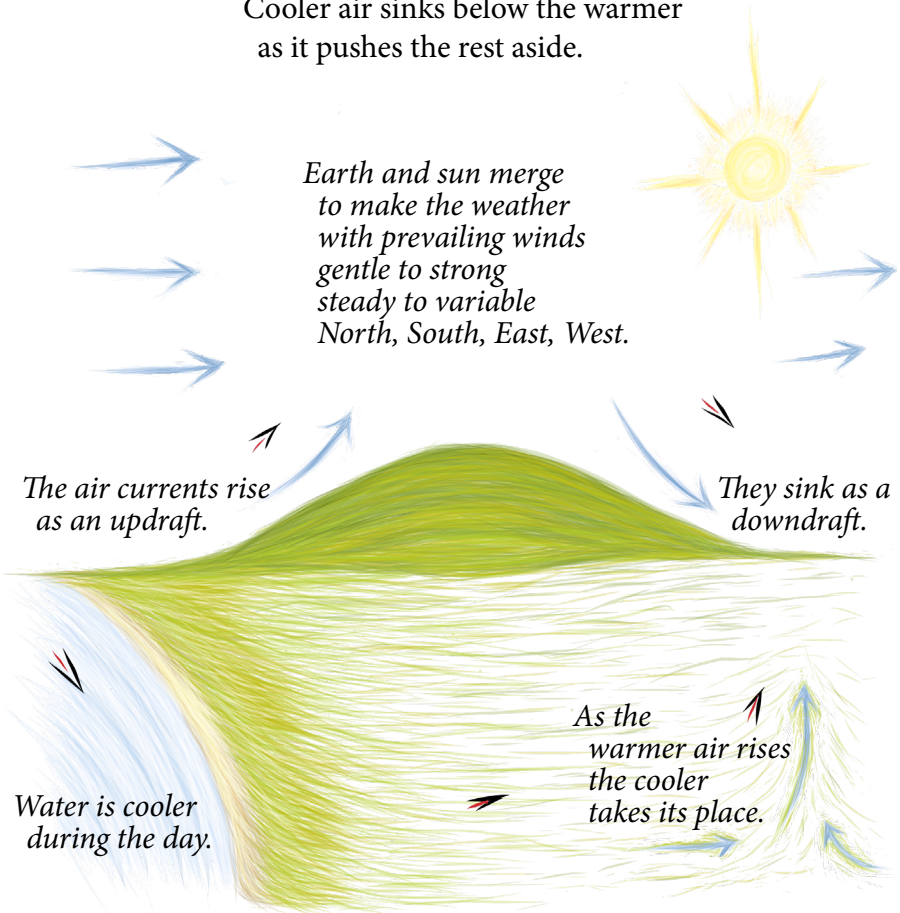
The plane flies
moving through the moving air
each pushing against the other
up, down, right, left, forward, back
the earth pulls all to itself.

The sun warms
as it is able.

Each thing warms or cools
that which it touches.

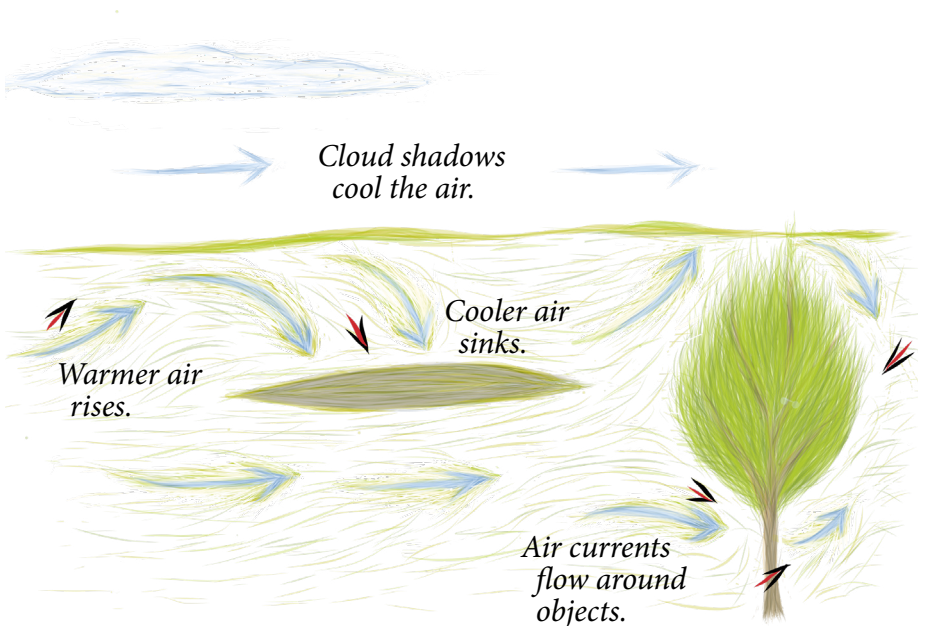
Warmer air rises above the cooler
as the surrounding air
takes its place.

Cooler air sinks below the warmer
as it pushes the rest aside.



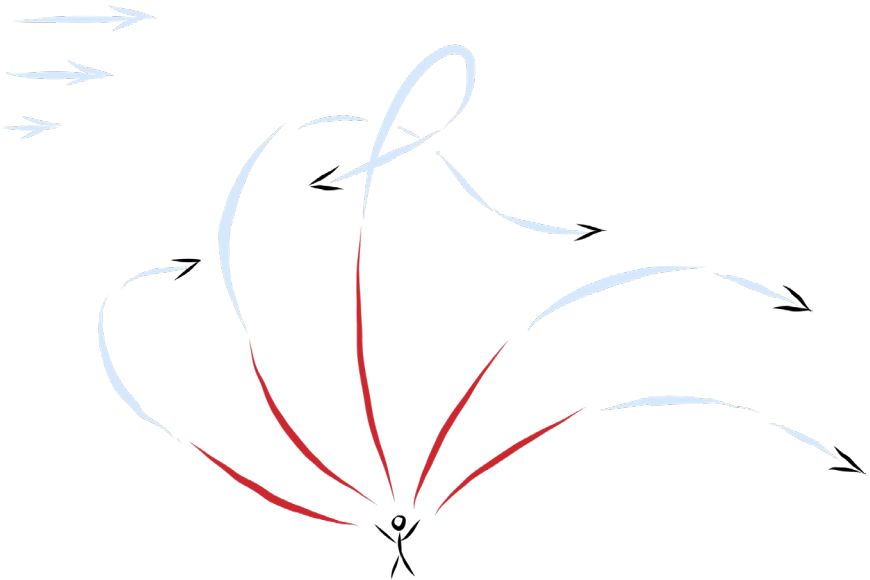
Sun Earth Air

The air moves by things
both far and near.
Warm and cool
make it rise and sink
and sweep from side to side.
Hills, walls, and trees
force a path
up, around, and down.
The ground
warmed by the sun
is warmer than the trees.
The land
warms and cools
quicker than the water.
Clouds cool
with shade, rain, and snow
as does fog, dew, and night.



When we launch the plane
we consider how the air and terrain
impact the glide
to figure the best
angle, direction, force, and orientation.

Depending on our flight goal
we seek the best choices
of what we control
so the plane transitions well
from launch to glide
the compelled to the free.



Launch

Angle

This is how high we aim our launch.

A 90 degree angle
is straight up towards the sky.

A 0 degree angle
is flat towards the horizon.

Direction

This is which way we aim our launch
North, South, East, West.

Consider launch direction
relative to wind direction.

Facing directly into the wind
launch to the right or left.

Launching straight against the wind
tends to loop back to the ground.

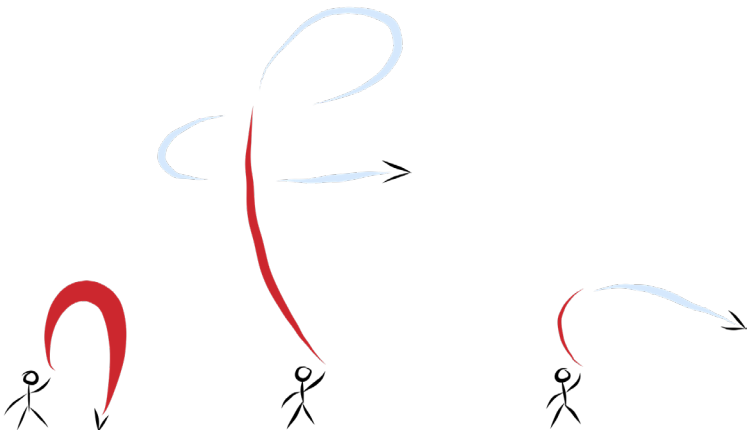
You can also try launching
with your back to the wind
although this often gives
a shorter flight.

Force

This is the amount of launch energy
weak to strong.

Orientation

This is the positioning of the body
yaw, pitch and roll.



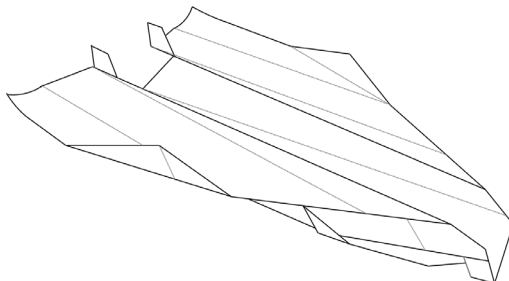
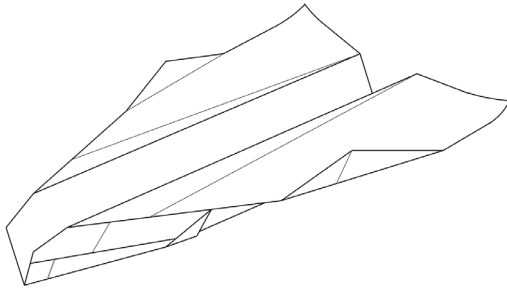
There are two basic ways
to launch the plane
the throw and the catapult.

These both take
time and effort to master.
Humble patience and practice
is the best way to success.

Start with lower energy launches
gradually increasing the force
as you gain confidence
in your ability and approach.

Watch and learn from each flight
adjusting the launch components
as seems best.

Trim the plane after most flights
gently refreshing the structure
and adjusting for any faults.



Throwing

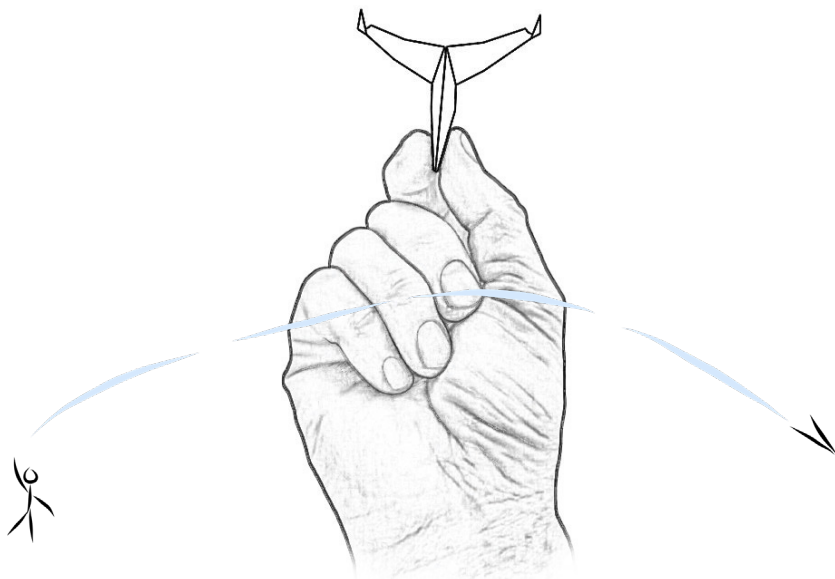
Hold the plane
upon the staple fold
between the thumb and forefinger
of your throwing hand.

Aiming the plane level to the ground
with a gentle throw
is the best way to start and learn
the characteristics of the plane
and the day.

Be relaxed when you throw.
Too much tension
in your arm, hand, and body
will give a poor result.

Flicking the wrist
can add speed to the plane
making a more effective launch.

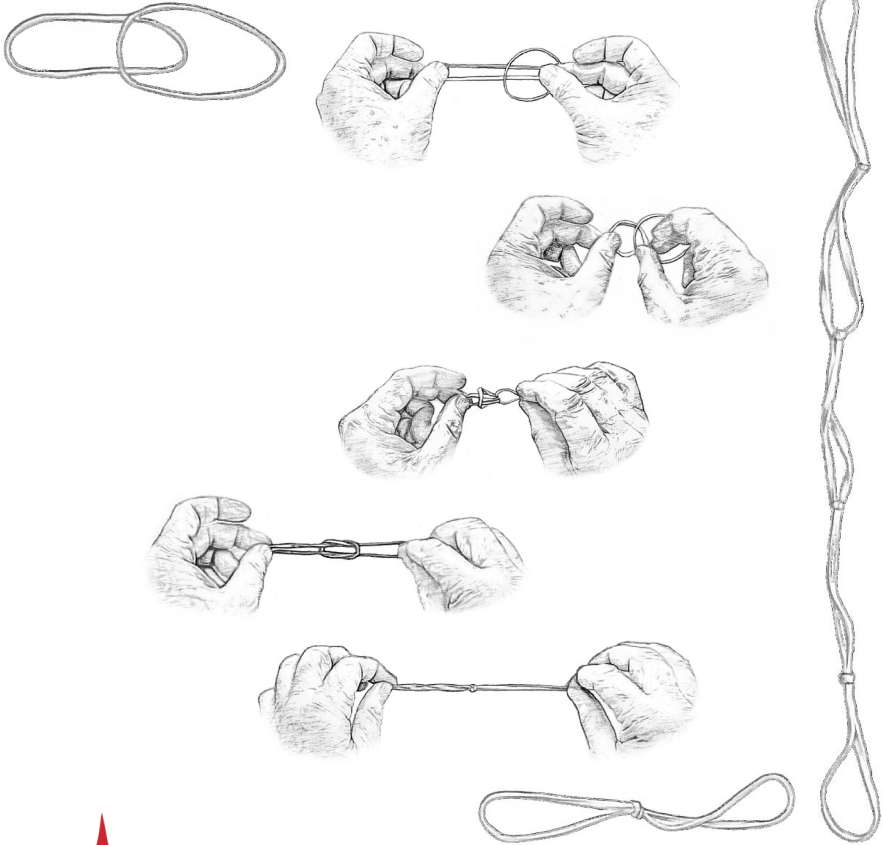
Increase the launch energy
as you grow confident
in the plane and your throw.



Catapult

The simplest form of catapult is a rubber band. You can join several rubber bands together to make a catapult as shown. Sizes 32 or 33 both work well.

The catapult should be longer than your arms can spread apart.



Using a catapult incorrectly can result in injury to you or people around you.

Always take exceptional care that the plane is not aimed at anyone and it flies away from you.



Catapult

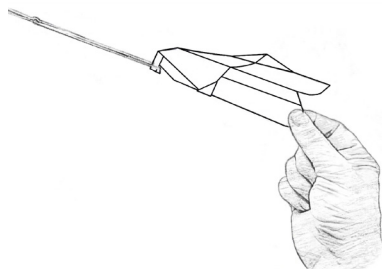
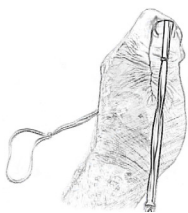
It is best
to use a high performance plane
such as the Shooting Star
when launching by catapult.

Hold an end of the rubber band
between the thumb and forefinger of one hand.
The rubber band
should lay over your thumb as shown.
Place the other end of the catapult
into the notch at the plane's nose.
Hold the tail section
careful not to bend the paper
stretching the rubber band
by moving your hands apart.

*Allow some slack in the rubber band.
Too much tension
can produce a dangerous unpredictable flight
and will certainly result in a short poor glide.*

*Carefully aim the plane to launch
away from anyone.*

Release the plane into the air.



Beyond the differences
of twisting and orientation
coming from launching with
a hand or rubber band
there is usually
a significant difference
in the amount of force.

A catapult
produces much more energy
than a hand attached to arm and body.

More energy
yields more extreme results.

All this needs to be considered
when trying to achieve a flight goal.

Acrobatics X'

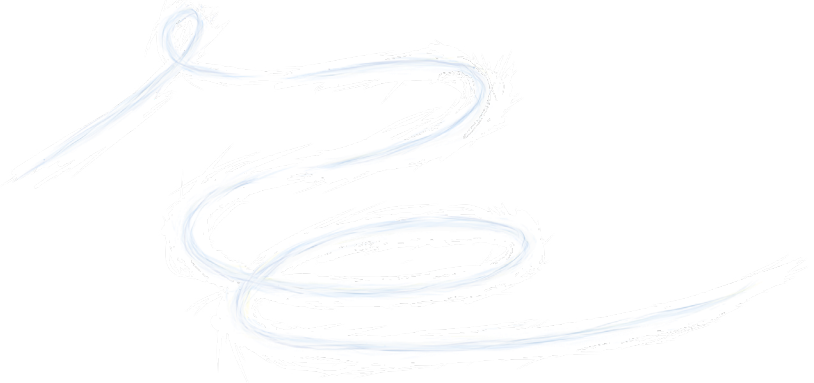
Acrobatic flights
have a wide range desired outcomes
and possible techniques
giving you much to explore and discover.

Accuracy ~'

For both launch types
accuracy requires
a consistent controlled launch.

Learn how to set your body
and use the right amount of force
so the plane travels in the desired direction
with minimum variation.

Work for balance among all things.



Goals and Methods

Distance >

Distance comes from a flight
having a launch and glide
following the same line
with the transition setting the plane
with the best height and orientation
to allow for the slowest fall
with fastest travel.

Start with launching at a 45° angle
with moderate force
adjusting both to discover
the best combination.

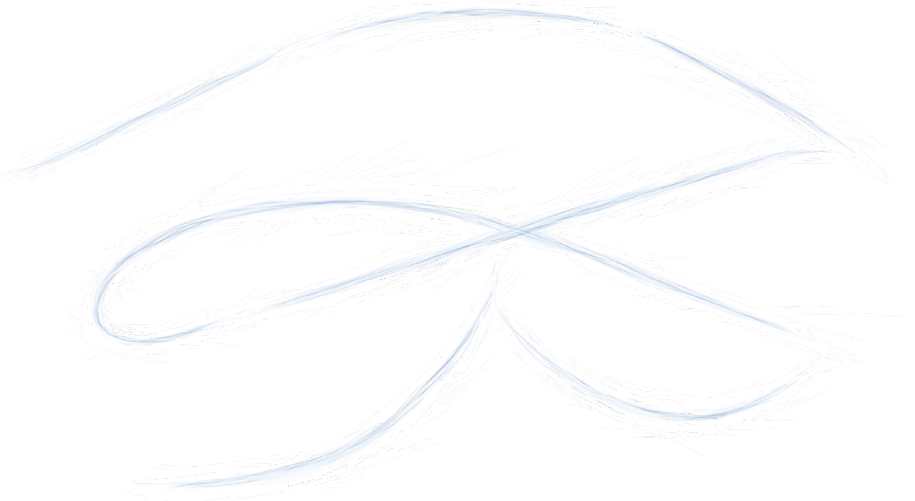
Duration ^

Height with a slow fall
gives the longest flights.

The launch
should be a controllable force
at a steep angle greater than 45°
placing the plane at maximum height.

The transition
should lose as little launch height as possible.

The glide
is best as shallow gentle circles.



Design, making,
launch, transition,
elements, surroundings
each unique as all merge together
yielding the glide.

How well we see each part
each union
and the whole
is a skill we grow.

What we see
becomes our memories
which feed our knowledge
that is ever changing.

This change
is the forming of our thought
the seed of discovery
bearing new ways
to better do what we do.

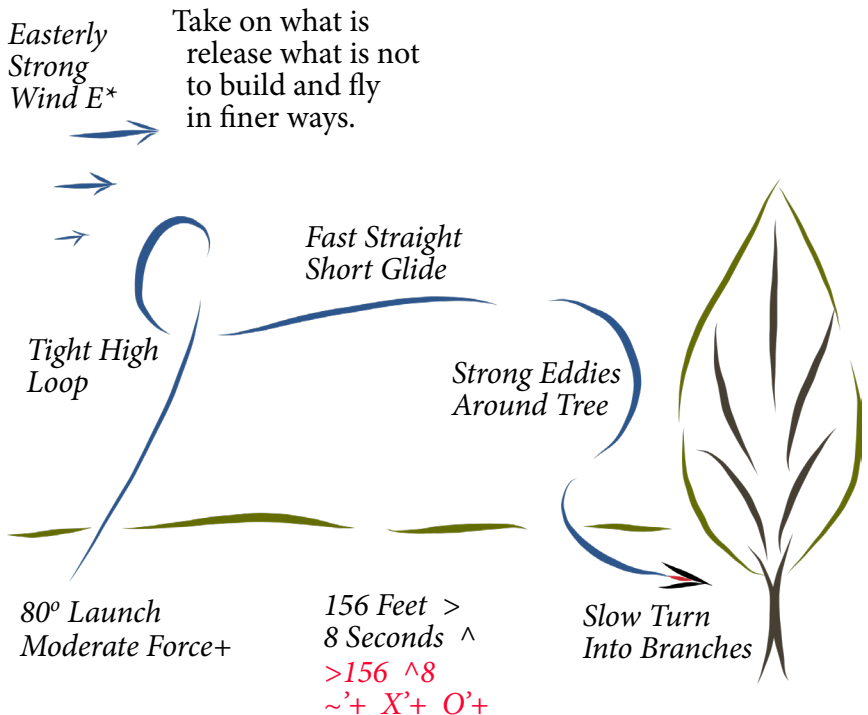


Glide

Whether the improvement
be in launch or trim
it is best to keep it simple
one change at a time.
This helps us know
if the change brought forth
the new result.

We also need to persist
trying again and again.
This helps ensure that our thought
aligns with what we see.

Embracing what we see
accepting it as it is
challenging what might be
we confirm or deny
what we hold as true
allowing a change for the better
or maybe something completely new.





11 Principles



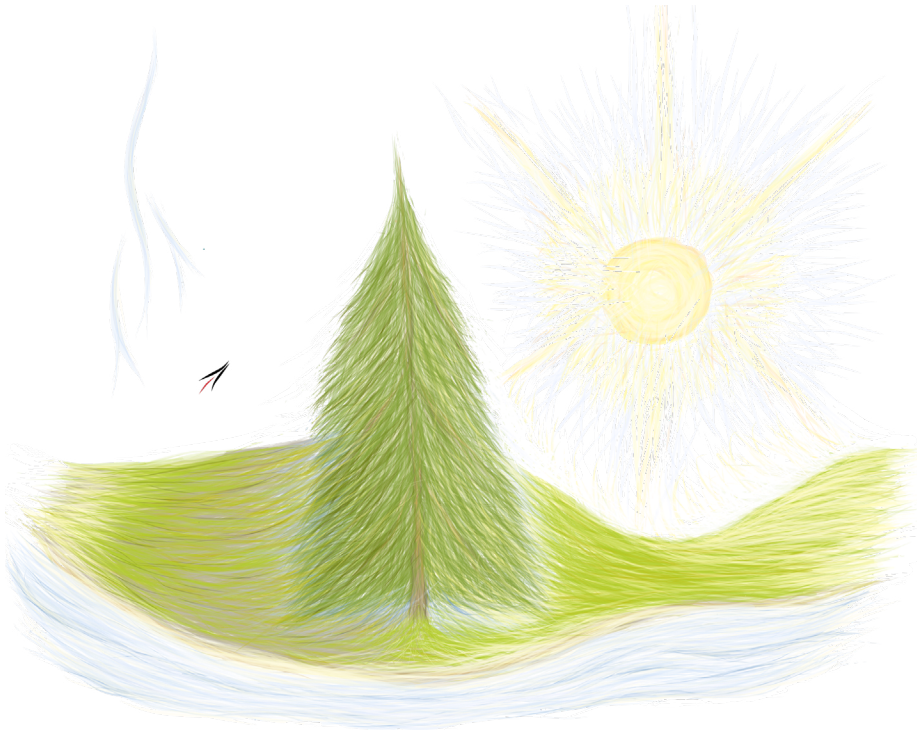
Pressed and cut
from a common pattern
the infinite becoming finite
the finite echoing infinity.

Cast into the boundless
held by immutable law
a rise and then a fall.

Hope, denial, pleading
praying for a gentle end.

Ending
is certain.

Yet
never chancing the moment
we remain dust.



There are limitless possibilities
for design, build, launch
and their every combination.
To find the way to our desired goal
we need guiding principles
to give us direction.

A principle reduces our experiences
and those of others
to a likely common root.
Conforming our actions
to a proven principle
helps us get to where we want to go.

A principle is proven
when the expected
matches the seen.
Yet we need to be careful.
Even proven principles
and accurate observations
can be misleading.
Hence
we need a way
to help us grow sure
of what we think we know.

We are the small
discovering the vast.

There is always more.



Like the fruitful tree
be ready to receive.

Quiet to hear
look to see.

All the thens
become the now
as we humbly gather
what comes our way.



Humble

See what it is
not what you think it should be.
Seek the value
in whatever the moment brings.

Respect others
listening to what they have to say
gathering what might be true
releasing what does not hold up.

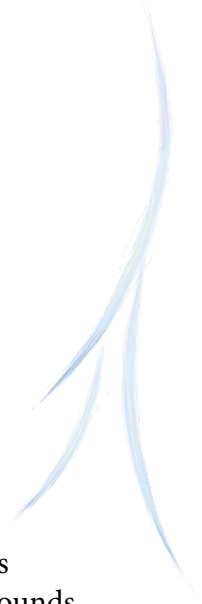
Consider both
what you discover
and what you learn from others.
Try both sets of ideas
be critical of them
use them together
to make something new.

Discover the limits
try to extend them
but allow for time enjoying success
staying within known attainable bounds.

You reap what you sow
something does not come from nothing
but there are always surprises.

Focus on what you should do
over what you should not do.
Use the guides
so not to stray.

Work to keep the good
but accept that it must end.
Everything gathered
will be scattered.



Like the changing seed
be hopeful to discover.

Trust to grow
yield to gain.

The earth of home
made us what we are
but now the new soil
makes us what we shall be.



Peaceful

Be willing to try something new
seek other ways you might go
keeping in mind
you reap what you sow.

Changing one thing
changes everything
be patient and careful
as you explore.

Finding a better way
requires effort and strength
to endure
and resolve many false turns.

Do the best you can do
trusting you will grow
and be able to do more.

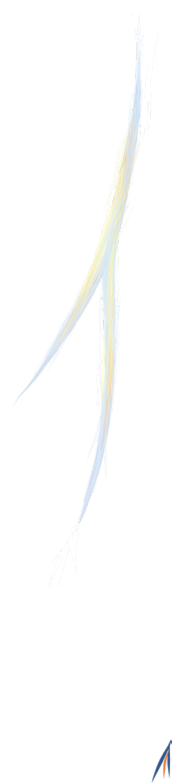
Let go of what failed
do not be captive to the past.

To stop doing something
do something else.

Choose what is best
over what is easy.

If you do not know
what to do
just do something.

You do not dream
if you do not sleep.
There is a time for work
and a time for rest.



Like the growing sprout
be pure to arise.

Be aware to discern
careful to understand.

The raw of the chaotic possible
refined to the cosmic probable
to separate the help from the harm
the true from the false.



State your belief clearly
then test if it is true
changing it if necessary
to be more like what you see.

Compare your beliefs
with those of others
considering any differences
that better match the common experience.

Work to keep your thoughts
simple and clear
making your guides useful
and ready for testing.

You find what you look for
be careful about what you seek.

Some principles
consistently reflect what we see.
Use these to interpret your observations
and to plan your actions
but expect to change
as you grow in understanding.

You will not get a different result
by repeating the same action
in the same context.

Yesterday's failure
may be tomorrow's solution.
Be willing to try something anew.

Seek to do
the right thing
at the right time.



Thoughts, memories, objects, events
all our seeing mind knows
are collections of sensations
gathered by what we think same
separated by what we think different.
They come into being
by means unseen
often unquestioned
sometimes unknowable.

We do not know what we do not see
we can only guess at what might be
the possible of infinity.

The principles we use
to gather, separate, define the known
draw out the constant
from the ever changing.

Our part of the all
is brief and small.
Yet held both firm and light
we sift the day from the night.



The Common Mind

We know ourselves
seeing what we can
guessing at the rest.

We also know others
that seem like ourselves
living and thinking as we do
separate
but reachable.

We can be fooled
by both ourselves and others
but it is through others
that we can have some certainty.

By sharing our thoughts
and comparing our knowledge
we can refine what we think
to better match our guess
at what there is
and what might be.

The common mind is not perfect
what it holds may be flawed
and it is easy for sharing to fail.
Yet it is the best we have
and worth the time and effort to seek.





12
The Nova



Upon the shore
of the glistening ancient sea
each breath a rolling swell.

Quiet rhythm
pulsing hush
choruses of wonder.

Our song lost
yet ever present
a thread merged
within an intricate weave.

The day yields
a blaze before night
perpetual battle
darkened clouds
fading memories.

A final chord
resolves in whispers
the yearned for stillness
at last.

Maker and seer
made and seen
cast to the winds
soon to rest.



Final Lesson

The last plane is alive
as you are alive
growing as you grow
waking with you
before the warming sun.

The instructions for this plane
are yours
to make, have, and give.

There is always more to say
but for now
it is better not to waste your time.
These last thoughts
complete this story.

The best of this book
is the margins
and the quiet
when it is closed.

Here you will find
even more than words.



We see
our bodies, minds,
relationships, possessions
but the seed of all
is the seer.

We are fleeting thought
viewing impressions of our surroundings
recollections of our experience
and contemplations of what might be.

What we know
is what we gather
what we remember
and what we guess.

We are
infinitesimal before the infinite
faulty and feeble
an instant of breath
doomed to perish
yet enduring in hope.



One and Many

A droplet of mist
before a fiery sun
yet made to echo
countless cosmic symphonies.

Both seer and seen
are little more than nothing
yet each moment
holds infinity.



Minds can be set countless ways
reflecting as many things.
The mind that is the seer is unique
but we are of many minds
each sensing and aware
in its own way.

There is us
but even more
there are others.
When joined with others
as a common mind
we benefit in sharing
experience and understanding.
This is especially true
as we develop and validate
useful principles.
The thoughts of the many
help ensure
our thought matches
our observation.


One of many
discovering others
brings the best fruit.

If we start humble
we are more able
to see things as they are.
Quiet, still, yielding
we lose ourselves
better sensing what is around us
thereby gaining something more.

Eyes open as the dawn
separating dark from light
to discern one thing from another.
Knowing more of what is
gives us a better chance
to discover what might be.

We are changed
by what we sense.
These changes
last as memories.
Our memories also change
as we are changed by our sensing.
And our memories change us
since they too are sensed.

The is becomes the was
and the was becomes the is.
We are the merging
of all our moments.



Free and Sure

Being peaceful
we know there is a way
to keep the best
of whatever comes.
Trusting, hopeful, sure
we free ourselves
embracing the constant trouble
discovering the lessons it brings.

Our heart caught up
in storming winds
a seed flying to new soil.
Certain within uncertainty
someday to find
the precious jewel we seek.

Acting as though
a problem can be solved
gives us a chance
to find the answer.
We bring our fears into being
if they are our only guide.

Grateful for the moment
we begin to know the best
of what we are given.



Becoming aware

we compare senses and thought
sifting what matches and seems true
from what is off and may be false.

Reflective, thoughtful, discerning

we engage ourselves
figuring out
what we need to do.

A cosmic song

rises above chaotic noise
calling us to awake.

We refine what we gather

making something useful
out of meaningless jumble.

It is a struggle to sift

true from false
valuable from worthless
useful from useless
but when we do
we are the most alive.

Coming to know

what is and is not
we begin to be effective.

We develop a vocabulary

words defined by what holds true.

We are more able

to bring our hopes into being.

Now our star

begins to shine
darkness no longer rules.

Hope in the Forest

Fields, meadows, forests
a book
all from a few seeds.

A lowly paper plane
evoking lofty thought.

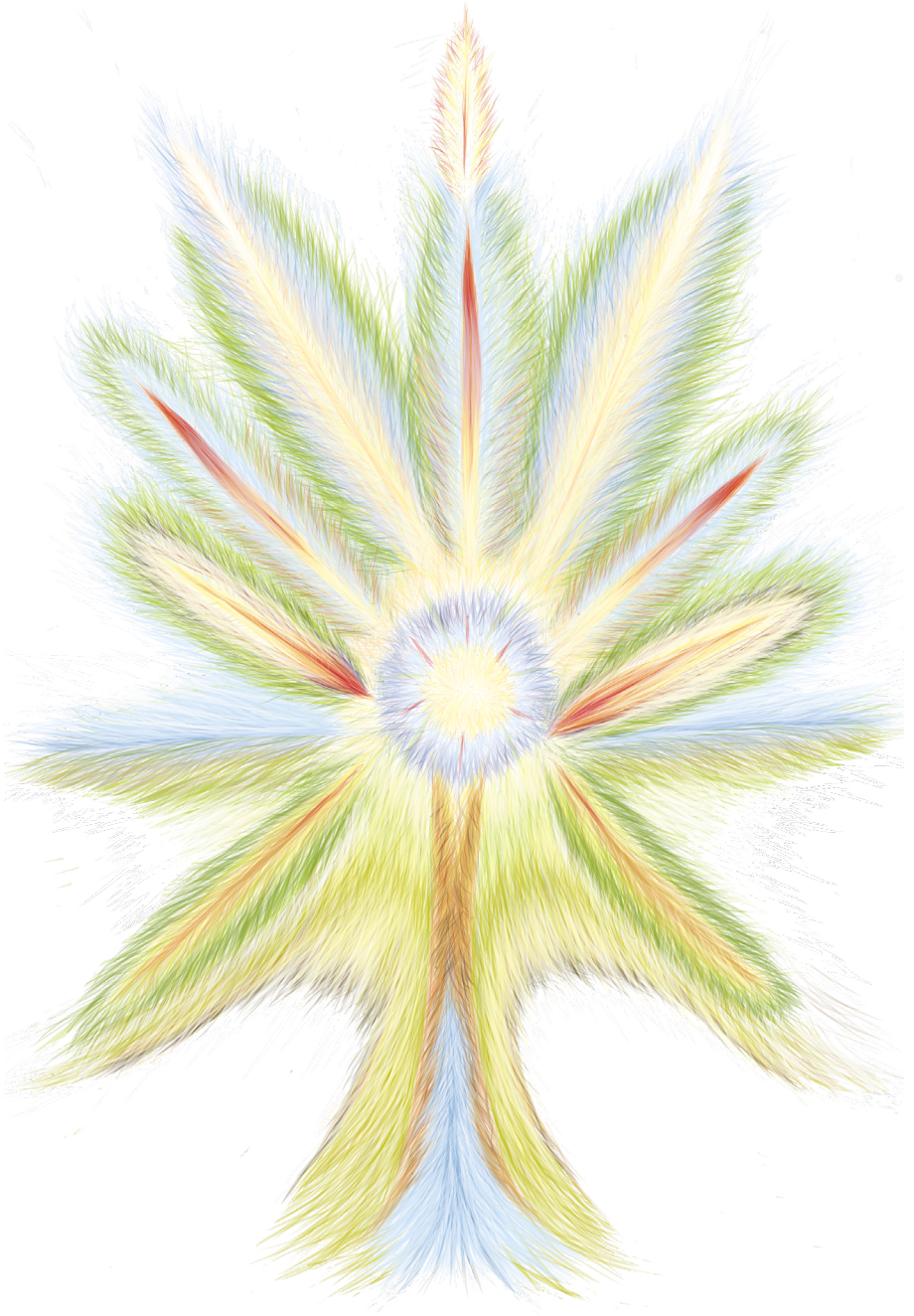
Sometimes silly and pretentious
sometimes a fair exchange for your time
hopefully a few grains gleaned
to help fill your belly.

Especially when many
useful words are few
and the kindest acts pass
swift as a drop of rain.

We are each alone
but when we touch
moments becomes forever
the heavens sing with starlight
gentle songs of tears and comfort.

This is where
life is abundant

This is where
we must part.



Take a deep breath
exhale
listen to the silence
know what is.

To have
is to lose
to gain again.

Aloft
as a seed.