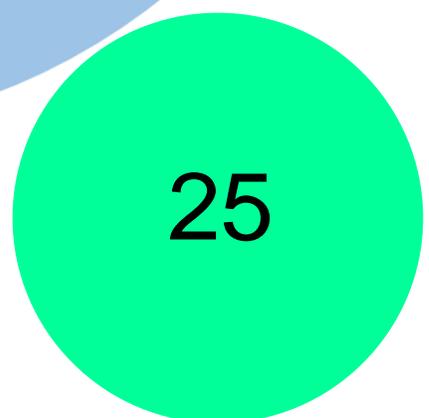
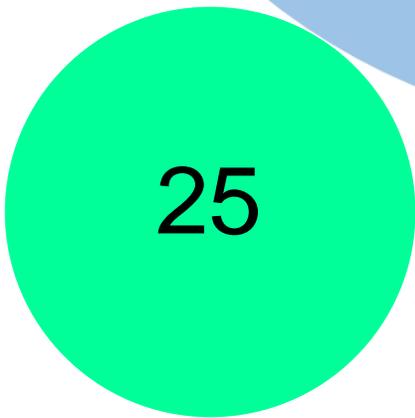
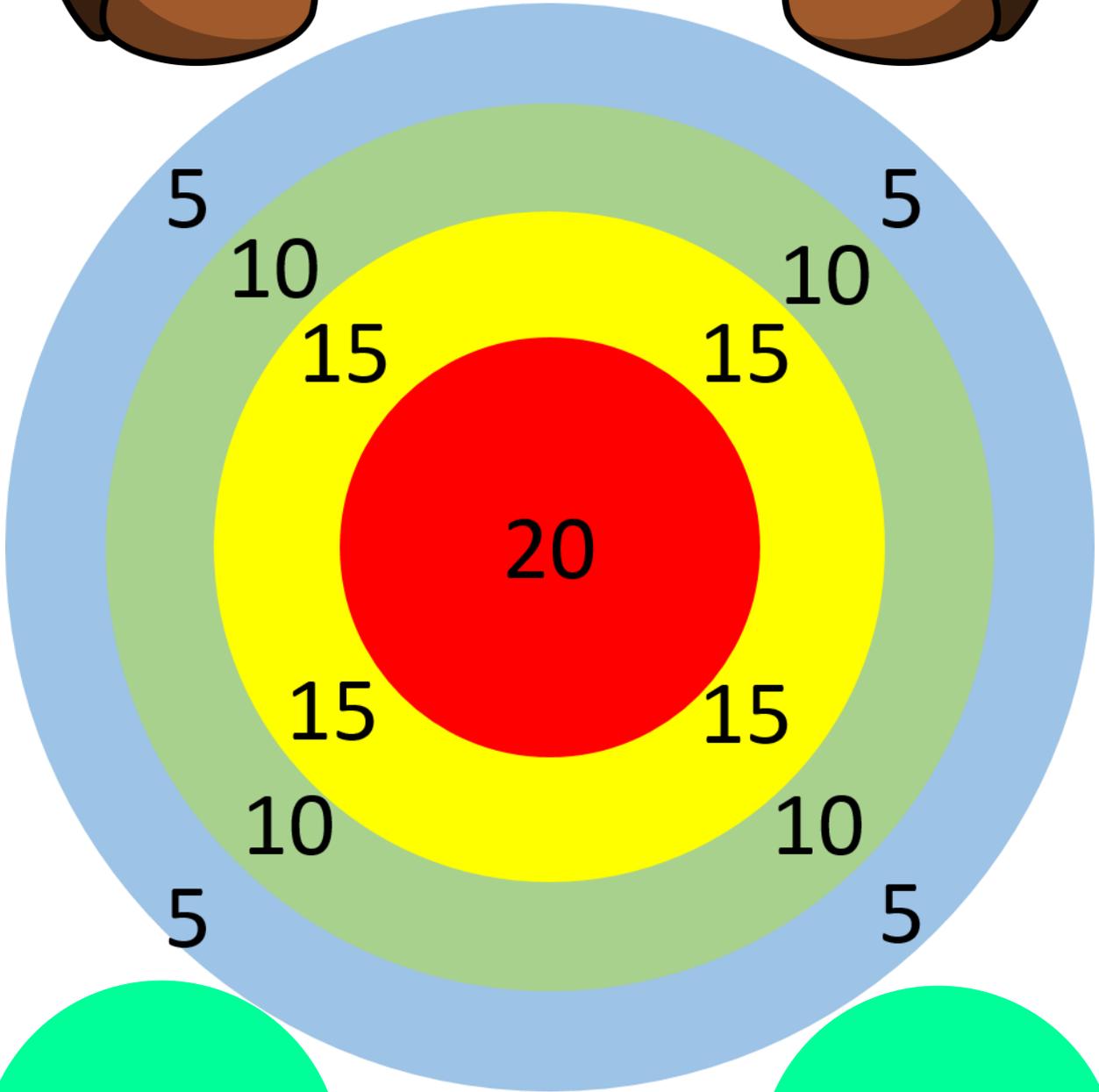




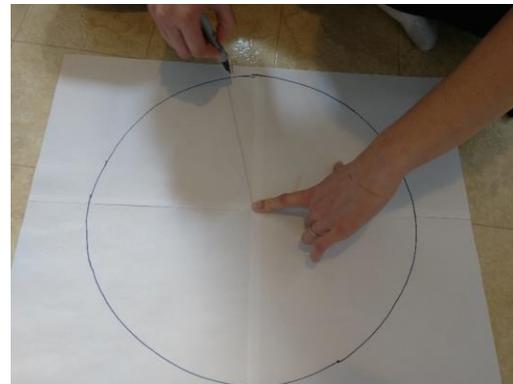
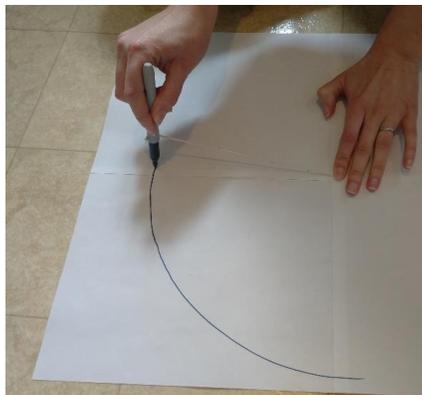
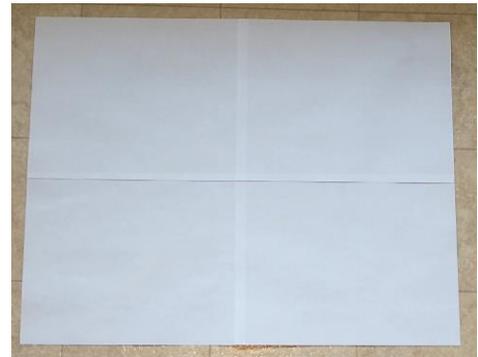
Acorn Target Practice



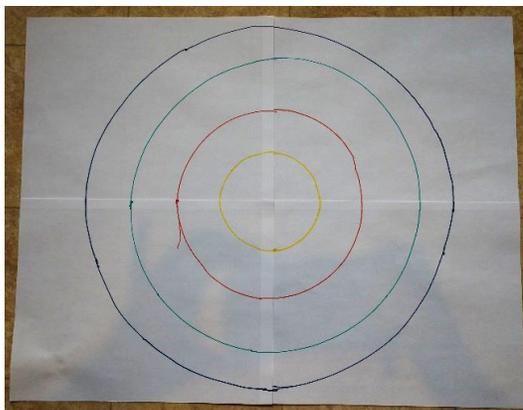
Acorn Target Practice Activity Guide

Step 1: Make a Target

- Take a plain piece of paper, or several sheets taped together. (You can also print out the first page of this activity guide to use for your target)
- Use a piece of string taped down in the center of your target. Attach a marker to it and draw different sized circles for your target. Or, find different sized bowls or other round objects to trace.



- Color in your circles and give them point values.
- Decorate your target any way you'd like.
- Mount your target someplace with plenty of room.



Step 2: Collect some items to throw

- Head outside to collect some things you can practice throwing at your target. Try to collect things of all different shapes, sizes, textures, and weights. You can also use things from around your home too.
 - Make sure to only collect items off the ground, never pick live things off trees or plants.



- Here is a collection of acorns, rocks, pine cones, sticks, pieces of bark, and even some leaves and seed pods
 - How will the differences in these objects affect how well they move through the air when you throw them?

Step 3: Mark your throwing alley

- Stand in front of your target. Take 5 big steps back and mark a line on the ground. Then take 5 more big steps back, and mark a second line.
 - Will you be more, or less accurate at the closer mark?

Step 4: Start throwing!

- Never throw anything at another person, you should only be throwing towards your target. Make sure no one is standing between you and your target (that includes humans and animals).
- Keep a piece of paper nearby so you can track how many points you have with different items. Some will be more accurate projectiles than others.
- Have fun!

Different ways to experiment

- How do different objects move through the air? Experiment with objects that are
 - Small and heavy (dense)
 - Large and light
 - Soft
 - Hard
 - Fluffy
 - Rough
 - Smooth
 - Flat
 - Lopsided
 - Long and narrow
- Does color affect how an object moves?
 - If you have two balls that are the same size, shape, and material, but one is red and one is blue, will they behave differently when you throw them?
- Try throwing
 - With your left hand and with your right hand
 - With your left eye closed, now your right, now with both eyes open
 - Standing on your left leg, now your right leg
- Experiment with different ways of throwing different items
 - Try throwing a flat piece of bark like a Frisbee
 - Throw overhanded and underhanded
 - Throw backwards, over your shoulder



Some of these pinecones are still sealed, and some have opened their woody scales. Will those scales catch the air and make them more or less accurate?

Some of these pinecones have been flattened, how will that change how they fly?



Maple seeds are sometimes called helicopters, or whirlybirds, but they're actually named samaras. Do you think they will be very accurate items to throw?

- Can you change any of your items to make them fly better?
- Try throwing a plain piece of paper. It doesn't fly very well does it?
 - What if you fold it in half 3 times?
 - What if you crumple it into a ball?
 - What if you turn it into a paper airplane?
- What other ways can you think of to experiment?