

Density: Lava Lamp

Materials:

- Vegetable oil
- Water
- Food coloring
- Alka-Seltzer tablet
- Cup or bottle without a lid
- Optional: timer

Note: The reaction between Alka-Seltzer and water creates carbon dioxide gas. Do not place a cap or lid on your chosen container, or it will pop off and create a mess!

Directions:

1. Fill about 1/4 of the cup or bottle with water.
2. Fill the rest of the cup or bottle with vegetable oil.
 - a. The oil floats on the water because it is less dense.
3. Add a few drops of food coloring. Consider:
 - a. The food coloring is water-based. Will it sink like the water, or float on top?
 - b. Why doesn't the food coloring color the oil?
4. Break up an Alka-Seltzer tablet into 3-4 pieces.
5. If using a timer, press start when the tablet is added to the bottle.
 - a. Stop the timer when the tablet has fully disappeared to see how long it took.
6. Add more pieces of Alka-Seltzer to start the bubbling again.
 - a. How long does it take all the pieces to disappear?
 - b. Do you think it would take more or less time for the tablet to disappear if it is not broken up?



Moon Phase Dance

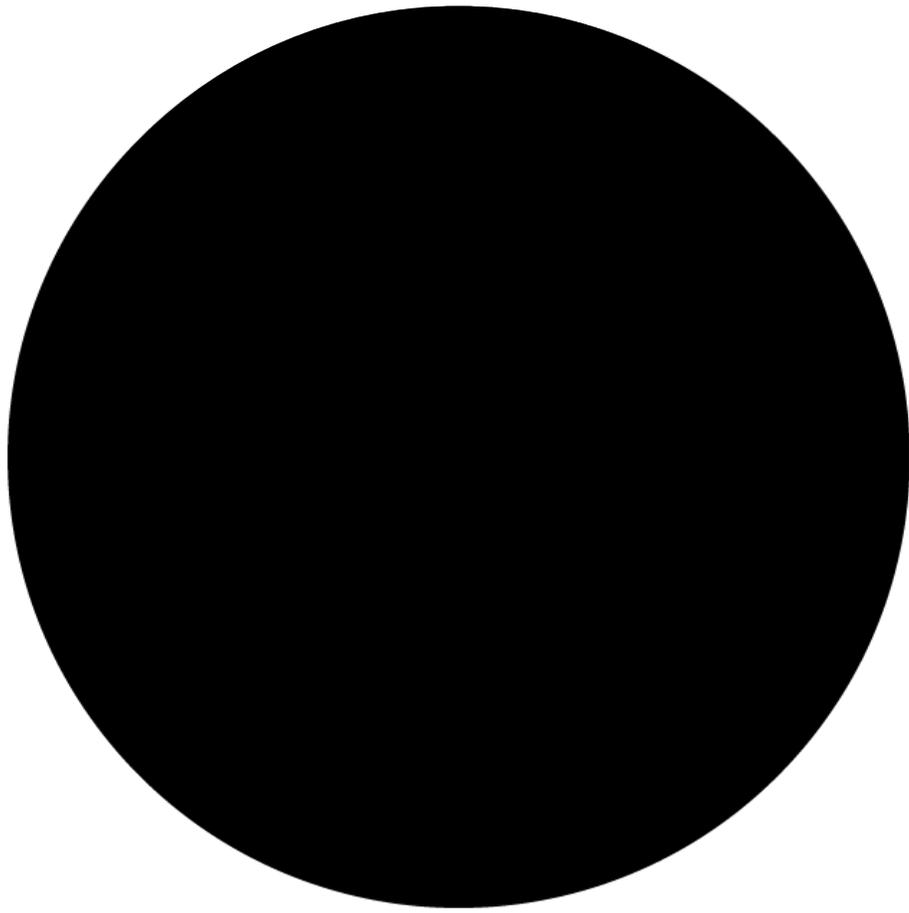
Materials:

- Moon phase images
- A game leader
- Space to move

Note: We recommend expanding upon this activity by having students create their own images of the moon phases before starting the game. The image of the Full Moon can be used as a template for students to color when using this addition.

Directions:

1. Have the game leader stand in the front of the room.
2. Have the players find an area where they can stand and have enough space to surround themselves with the moon images.
3. Have the players face the game leader, and place the image of the New Moon in front of their feet.
4. Have players turn so the game leader is behind them, and place the image of the Full Moon in front of their feet.
5. Have players fill in the correct order of the remainder of the images in clockwise order.
6. Once all the players are ready, the game leader can call out a moon phase.
7. Players should spin clockwise until they are facing the correct phase.
8. Repeat steps 6-7 to continue studying the moon phases through this Moon Phase Dance!



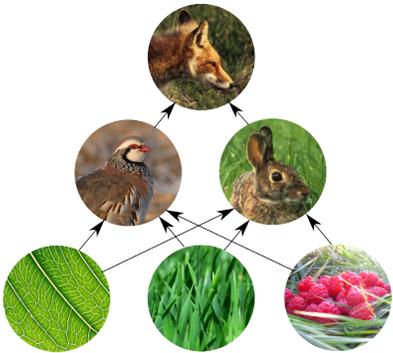








Food Webs & Chain Game



Materials:

- Food chain cards
- A game leader

Directions:

1. To prep the cards provided, only cut along the dotted lines.
2. Have players grab a card from the deck.
 - a. Give players time to check what their organism is and where it gets their energy from.
3. Ask players to find someone with a card that has a card that is their energy source, and stay near them.
 - a. If their energy source is the sun, they can stay where they are- no need to move!
 - b. If their source is a dead animal, then they will need to wait to see who survives!
4. After everyone has tried to find an energy source:
 - a. Discuss if any organisms did not survive, and why.
 - b. Discuss which animals benefit from dead organisms.
 - c. Discuss any food chains that have developed.
 - d. Discuss how much energy an organism may have to use to find a food source.
5. Try removing some organisms from the deck, and playing again! How has this affected the food chains?



CORN PLANT

Energy Source:

Sun



MOUSE

Energy Source:

Corn
Sunflower
Berries
Bark
Grasshoppers
Beetles



BARN OWL

Energy Source:

Mice
Shrews
Moles
Voles
Groundhog



GRASS

Energy Source:

Sun



SHREW

Energy Source:

Grasshoppers
Corn
Sunflower
Berries
Roots
Snails



GARTER SNAKE

Energy Source:

Shrew
Mice
Mole
Insects
Earthworm



SUNFLOWER

Energy Source:

Sun



SPARROW

Energy Source:

Sunflower
Berries
Beetles
Grasshopper
Earthworm



CAT

Energy Source:

Birds
Mice
Shrew
Mole
Rabbit
Fish



BERRY

Energy Source:

Sun



EARTHWORM

Energy Source:

Berries
Sunflower
Grass
Dead Roots
Dead Leaves



MOLE

Energy Source:

Earthworms
Grubs
Bulbs (roots of plants)



WEASEL

Energy Source:

Mole
Shrew
Mouse
Rabbit



VULTURE

Energy Source:

Dead Weasel
Dead Rabbit
Dead Cat
Dead Groundhog
Dead Fox
Dead Animals



LETTUCE

Energy Source:

Sun



RABBIT

Energy Source:

Lettuce
Grass
Flower Leaves
Bark & Twigs



BEETLE

Energy Source:

Leaves
Flowers



SKUNK

Energy Source:

Beetles
Grubs
Berries
Mice
Lettuce



BACTERIA

Energy Source:

Dead Animals
Dead Plants
Dead Insects



HONEYSUCKLE

Energy Source:

Sun



DEER

Energy Source:

Honeysuckle
Grass
Corn
Berries
Lettuce



COYOTE

Energy Source:

Deer
Rabbits
Mice
Garter Snakes
Fox
Groundhog



GRASSHOPPER

Energy Source:

Grass



WILDFLOWER

Energy Source:

Sun



GRUBS

Energy Source:

Grass Roots
Flower Roots



GRONDHOG

Energy Source:

Grubs
Grass
Berries
Lettuce
Grasshopper



FOX

Energy Source:

Rabbits
Mice
Moles
Berries
Bird Eggs



GRASS

Energy Source:

Sun



MOUSE

Energy Source:

Corn
Sunflower
Berries
Bark
Grasshoppers
Beetles



GRUBS

Energy Source:

Grass Roots
Flower Roots