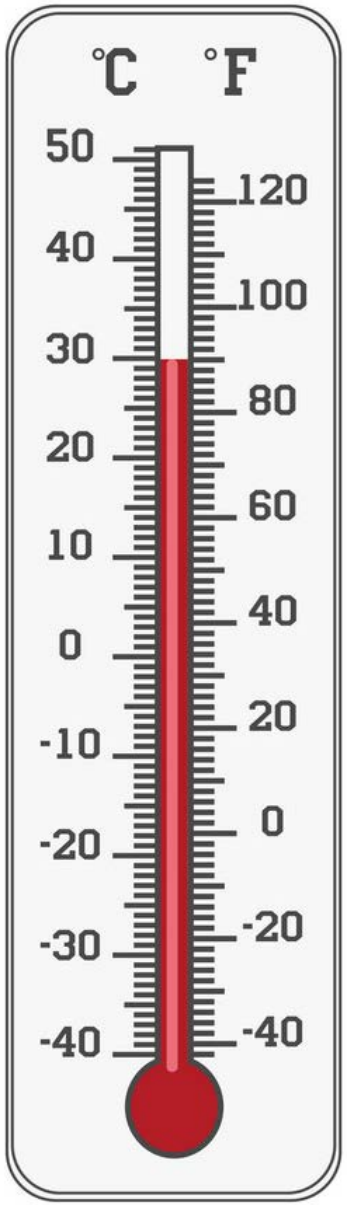
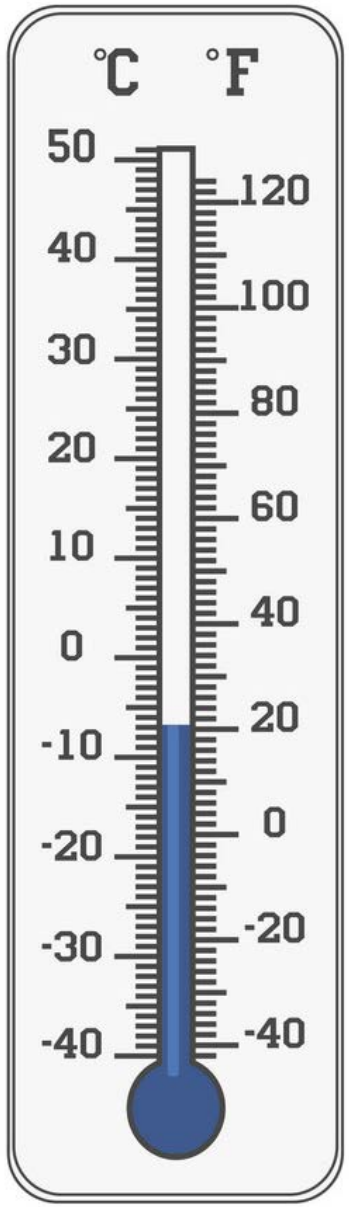


Body Temperature

HOT AND COLD TEMPERATURE

Insulation



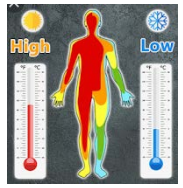
Animals

Heating/Cooling

Work Plan D

Grade 2

SPECIFIC LEARNING OUTCOMES



1. Describe temperature in relative terms, using expressions, such as hotter than, colder than.

2. Measure temperature in degrees Celsius (°C).

3. Describe how heating and cooling materials can often change them, e.g., melting and freezing, cooking, burning.

4. Identify safe practices for handling hot and cold materials and for avoiding potential dangers from heat sources.

5. Recognize that the human body temperature is relatively constant and that a change in body temperature often signals a change in health.

6. Identify ways in which the temperature in homes and buildings can be adjusted

7. Describe, in general terms, how local buildings are heated: • identify the energy source or fuel • recognize that most buildings are heated by circulating hot air or hot water • describe how heat is circulated through the school building and through their own homes.

8. Describe the role of insulation in keeping things hot or cold and identify places where some form of insulation is used, e.g., clothing, refrigerator, coolers, homes.

9. Identify materials that insulate animals from the cold, e.g., wool, fur, and feathers; and identify materials that are used by humans for the same purpose.

10. Design and construct a device to keep something hot or cold.

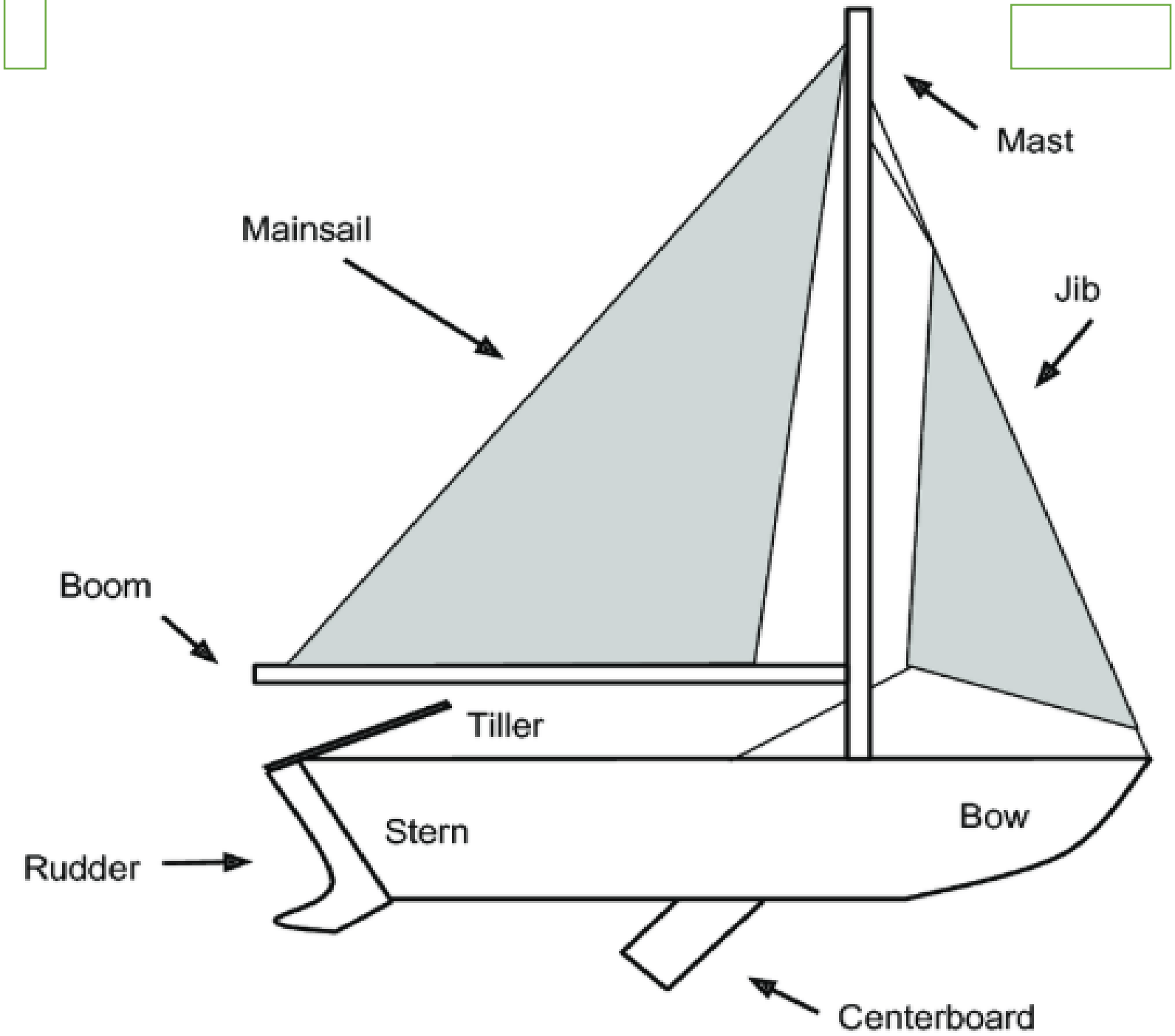
11. Describe ways in which temperature changes affect us in our daily lives.

Students investigate changes in the weather and describe how people and other living and non-things respond to these changes.

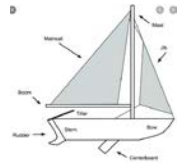
Grade 2

Work Plan B

BOATS AND BUOYANCY



Grade 2



SPECIFIC LEARNING OUTCOMES

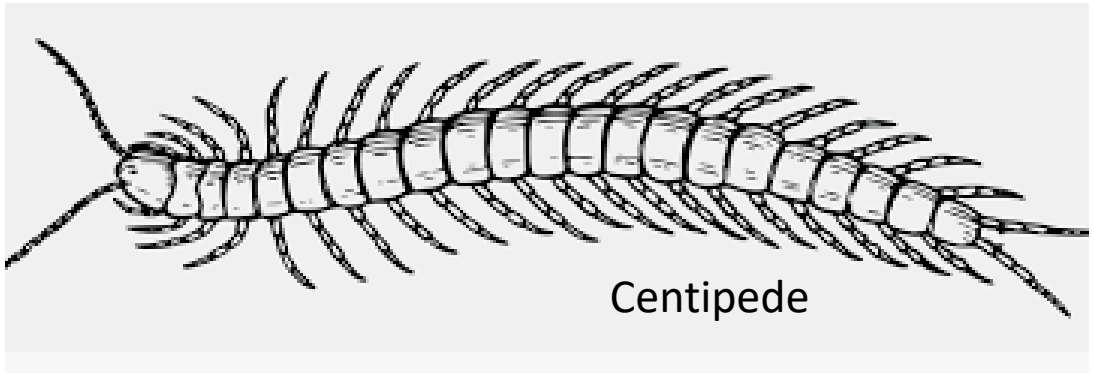
1. Describe, classify, and order materials based on their buoyancy.
2. Alter or add to a floating object so that it will sink and alter or add to a non-floating object so that it will float.
3. Assemble materials so they will float, carry a load and be stable in water.
4. Modify a watercraft to increase the load it will carry.
5. Modify a watercraft to increase its stability in water.
6. Evaluate the appropriateness of various materials to the construction of watercraft, in particular: • the degree to which the material is waterproof (not porous) • the ability to form waterproof joints between parts • the stiffness or rigidity of the material • the buoyancy of the material.
7. Develop or adapt methods of construction that are appropriate to the design task.
8. Adapt the design of a watercraft so it can be propelled through water.
9. Explain why a given material, design or component is appropriate to the design task.

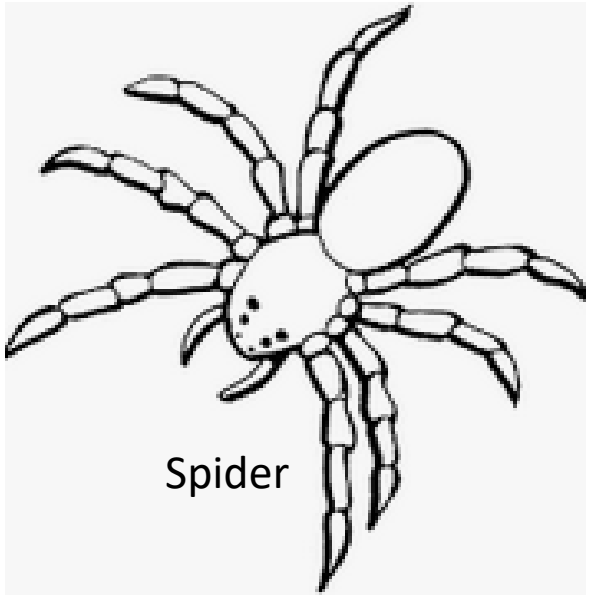
How can we use science methods and creativity to construct a device that moves a load?

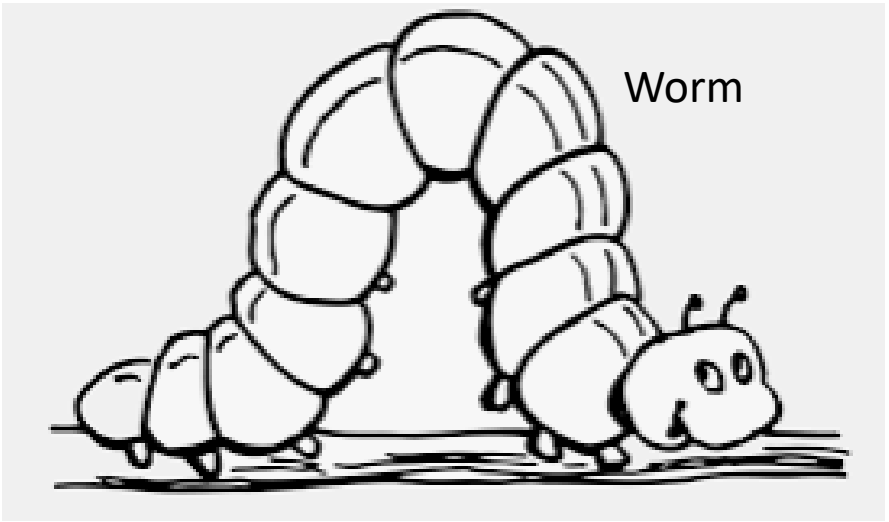
Grade 2

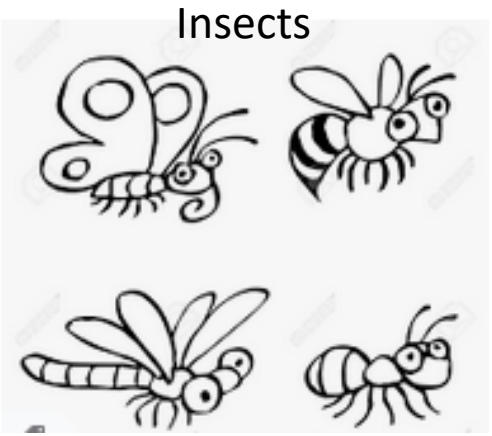
Work Plan
E

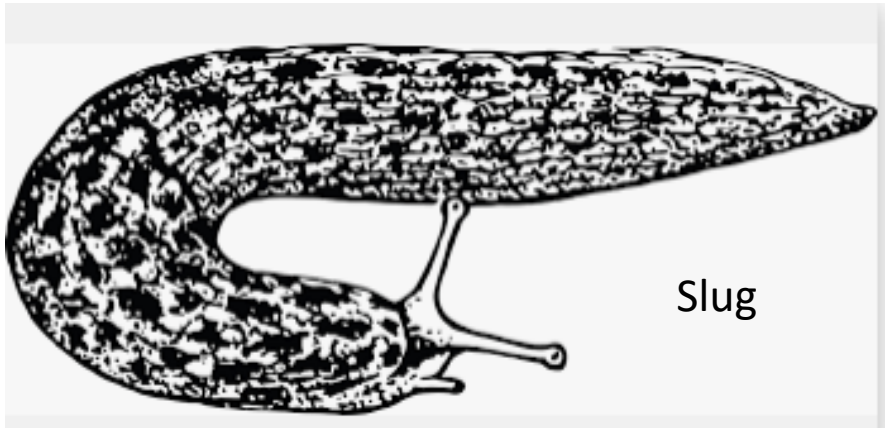
SMALL CRAWLING AND FLYING ANIMALS





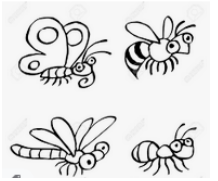






Grade 2

SPECIFIC LEARNING OUTCOMES



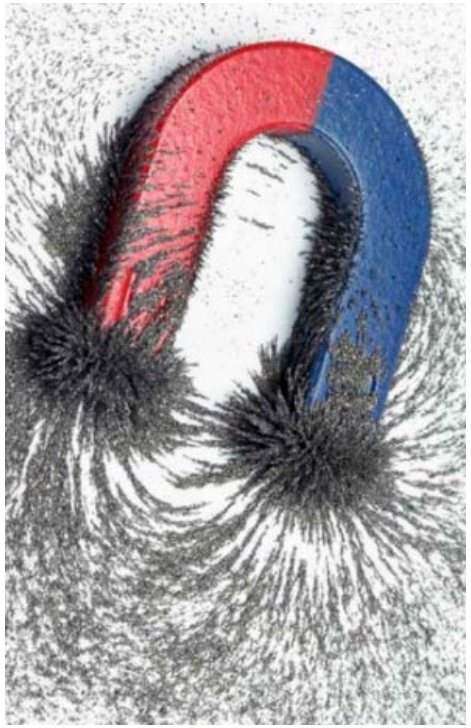
- 1. Recognize that there are many kinds of small crawling and flying animals and identify a range of examples that are found locally.
- 2. Compare and contrast small animals that are found in the local environment. These animals should include at least three invertebrates—such as insects, spiders, centipedes, slugs, worms.
- 3. Recognize that small animals, like humans, have homes where they meet their basic needs and describe any special characteristics that help the animal survive in its home.
- 4. Identify each animal's role within the food chain.
- 5. Describe the relationships of these animals to other living and nonliving things in their habitat, and to people.
- 6. Identify and give examples of ways that small animals avoid predators, including camouflage, taking cover in burrows, use of keen senses and flight.
- 7. Describe conditions for the care of a small animal and demonstrate responsible care in maintaining the animal for a few days or weeks.
- 8. Identify ways in which animals are considered helpful or harmful to humans

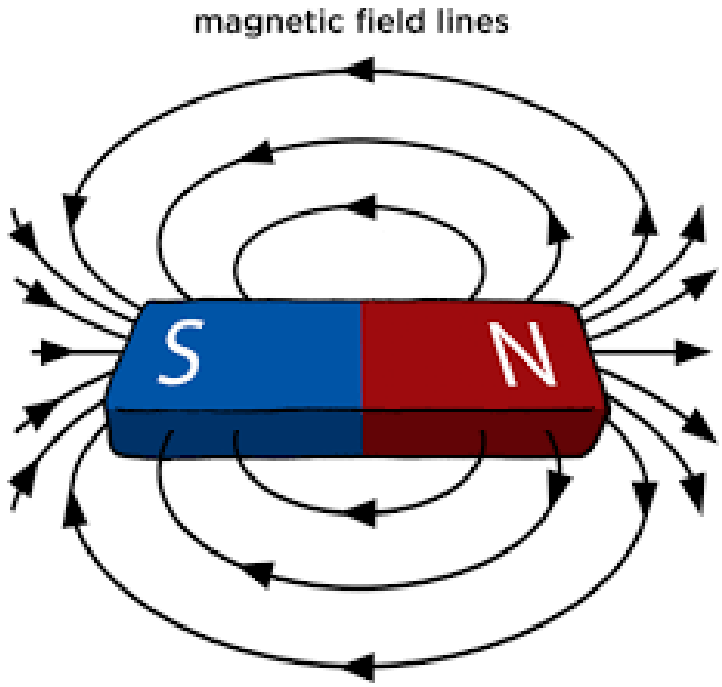
Students investigate and compare how living things interact with the environment to meet basic needs.

Grade 2

Work Plan
C

MAGNETISM





Grade 2

SPECIFIC LEARNING OUTCOMES

1. Identify where magnets are used in the environment and why they are used.

2. Distinguish materials that are attracted by a magnet from those that are not.

3. Recognize that magnets attract materials with iron or steel in them; and given a variety of metallic and non-metallic objects, predict those that will be attracted by a magnet.

4. Recognize that magnets have polarity, demonstrate that poles may either repel or attract each other, and state a rule for when poles will repel or attract each other.

5. Design and produce a device that uses a magnet.

6. Demonstrate that most materials are transparent to the effects of a magnet. A magnetic field will pass through such materials, whereas other materials interact with a magnet.

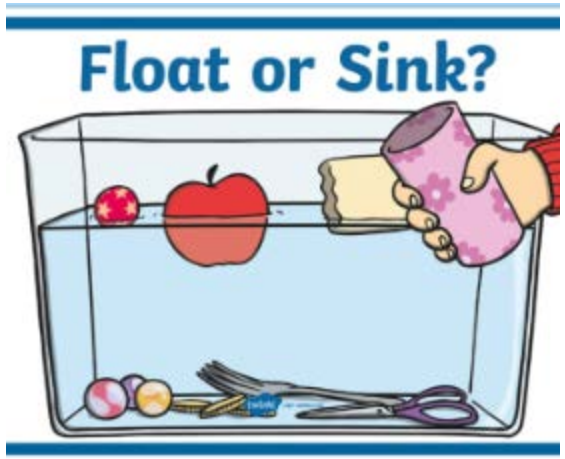
7. Compare and measure the strength of magnets.

How can magnets show the forces of push and pull?

Grade 2

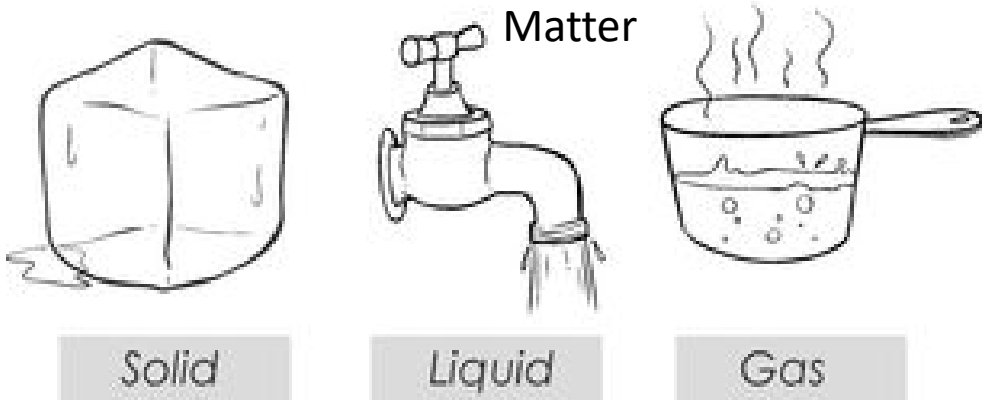
Work Plan A

EXPLORING LIQUIDS

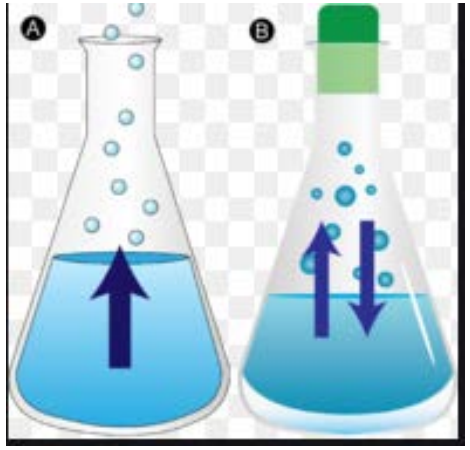


Density/viscosity

States of Matter



Absorbent and Non-Absorbent Materials



Evaporation: Water Cycle

Grade 2

1. Recognize and describe characteristics of liquids: liquid flow • describe the shape of drops • describe the surface of calm water.

2. Compare water with one or more other liquids, such as cooking oil, glycerine or water mixed with liquid detergent. Comparisons interactions with other liquids and interactions with solid materials.

3. Compare the amount of liquid absorbed by different materials.

4. Evaluate the suitability of different materials for containing liquids.

5. Demonstrate an understanding that liquid water can be changed to other states.

6. Conduct an experiment to predict that the water level in open containers will decrease due to evaporation, but the water level in closed containers will not decrease.

7. Conduct an experiment to predict that a wet surface will dry more quickly when exposed to wind or heating and apply this understanding to practical situations, such as drying of paints, clothes, and hair.

8. Recognize that water is a component of many materials and of living things.

9. Recognize human responsibilities for maintaining clean supplies of water, and identify actions that are taken to ensure that water supplies are safe.

SPECIFIC LEARNING OUTCOMES

Students investigate characteristics of liquids and the importance of water to living things in the environment.

Grade 2