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This activity is suggested for use with the Ontario Curriculum.

Grade 6: Matter and Energy

...a super way to explore classification systems





* Classification of the components within a diverse system is a beginning point for understanding the interrelationships among the components.
* Because all living things are connected, maintaining diversity is critical to the health of the planet.





Inquiry Skills Used

This is a research activity with students using their observation skills to act as primary reference sources that will lead to inquiry based learning.

Safety Considerations

 The teacher should be aware of any potential allergens with

 students as they collect seeds in the field.

Background

All tree flowers produce fruit that encases seeds. Tree seeds spread throughout the surrounding habitat in many ways. Some seeds stick to things, others bounce when they land, and some are even light enough to travel long distances with the air currents. Looking at seeds within their habitat helps students to collect, classify, and learn about their unique qualities. Because all living things are connected, maintaining diversity is critical to the health of the planet.

What You Need

* Magnifying glasses
* Small plastic containers
* Rulers
* A variety of seeds
* Optional: masking tape, wool socks or blankets, if students are collecting their own

What to Do

1. Gather seed samples from home or as a class. Seeds can be gathered on masking tape

bracelets, a wool blanket, or wool socks placed over the shoes of the students as they walk

through a meadow.

1. Observe the seeds and note the similarities and differences. Make hypotheses about how the seeds were distributed.
2. Students should throw their seed samples into the air to disperse them. Students should record their findings, including measuring how far the seeds travelled.
3. Have students use their information to devise their own classification systems according to size, shape, colour, texture or method of dispersal. Dispersal method might include “hitchhikers” which attach to other things to travel, “bouncers” that travel by bouncing, “flyers” which fly through the air because they are so light, etc.
4. Students should sort seeds according to the system they created.

Where to Go from Here?

Students could chart their classification system and draw an example of each one. They could compare seed samples from a variety of locations to detect patterns. They could use reference books to find the true name of each seed they found.

STSE Links

How can covering a meadow with asphalt affect the distribution and germination of seeds?

Some seeds are carried to other locations in the fur of animals. How can the destruction of the animals’ habitats affect the continued growth of plant species?

How can increasing the width of highway 401 affect the wind-travelling seeds’ ability to move to other meadows or forested areas?

Cross Curricular Connections

 Language

* Teach an overall understanding of biodiversity, its contributions to the stability of natural systems, and its benefits to humans by reading the book, *The Tree of Life*. This book uses concrete examples of very large numbers. Students can compare numbers of species in each kingdom.

 Reading

* To enhance this activity, the following book can be read to the class as a teacher-directed reading: *Life Cycles* by Michael Elsohn Ross.

 This book is available online from The Magic Suitcase at the following site: [www.magicsuitcase.ca](http://www.magicsuitcase.ca).

Credit Where Credit is Due

Adapted from *Focus on Forests*, Ministry of Natural Resources, 1989.

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