Scientific observation and measurement projects

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Scientific Observation at mealtime

Carefully observe and take detailed notes to describe your meal.
Then draw and label a picture of your food.

Quantify (count or measure) when possible.
Use your senses:

- Sight – colors, shapes, size
- Smell
- Taste – flavors
- Touch – textures
- Hearing – sounds

Scientific Observation of plants

Sprouting Seeds

Place 4 layers of paper towels in the bottom of a baking pan (if using full-size sheets, use 2 paper towels and fold in half.)
Place 6 seeds each of 2 or 3 different kinds or vegetables or flowers, on the paper towel. Leave about 1 cm of space between each of the seeds, with a slightly large space between the different kinds.
Write down a description of each type of seed.
Cover the seeds with another folded paper towel (2 layers).
Pour 200 ml (about ¾ cup) of water evenly over the top to moisten everything.
One or two times per day, peel back the top layer of the paper towels and observe the seeds. Use a magnifying glass if you have one.
Write down your observations including the date and time. Once you start noticing changes, also draw pictures. Are there any differences between the types of seeds?
Continue checking and recording your observations for at least 15 days. (The seed packet should tell you the expected sprouting time for each type of seed.)
Add water as needed to keep the paper towels moist.

Measuring Plant Growth

Plant seeds in a container or in a garden.
Observe and measure their growth. Record the information and draw pictures.
You may also want to observe and measure any weeds that grow next to your plant.

Design and conduct an Experiment

For an experiment, you need to keep as many conditions equal as possible and only change one variable.
One example would be to observe the effect of light on growing plants.
Plant 2 or 3 seeds of the same kind in dirt in each of 3 different cups and water them to moisten the dirt (if you can use clear cups, you might be able to see the roots.)
Try to use the same amount of dirt in each cup, plant the seeds at the same depth & distance apart, add the same amount of water, etc.
Put one in a sunny window, one in the middle of a room with only indirect lighting, and one in a cupboard with no light.
Water as needed, trying to keep the same level of moisture for the dirt in each cup.
(Question – is measuring and adding the same amount of water to each at the same time the same as keeping the same level of moisture in the dirt? Why or why not? How can you determine the moisture level?)
What do you think will happen with each plant? Record your prediction; your hypothesis.
Check on the seeds once a day and record your observations in words and drawings.
After you end your experiment, if you want the plants to continue to grow you will need to transplant them into a larger container or outside.