

# Inquiry

## Question

- ◇ Scientific investigations are designed to gain knowledge about the natural world.

## Investigate

- ◇ A scientific investigation may include making and following a plan to accurately observe and describe objects, events, and organisms; make and record measurements; and predict outcomes.

## Inference

- ◇ Inferences are based on observations and evidence.

## Investigate

- ◇ Simple instruments, such as magnifiers, thermometers, and rulers provide more information than scientists can obtain using only their unaided senses.

## Model

- ◇ Models are useful for understanding systems that are too big, too small, or too dangerous to study directly.

## Explain

- ◇ Scientists develop explanations, using observations (evidence) and what they already know about the world. Explanations should be based on evidence from investigations.

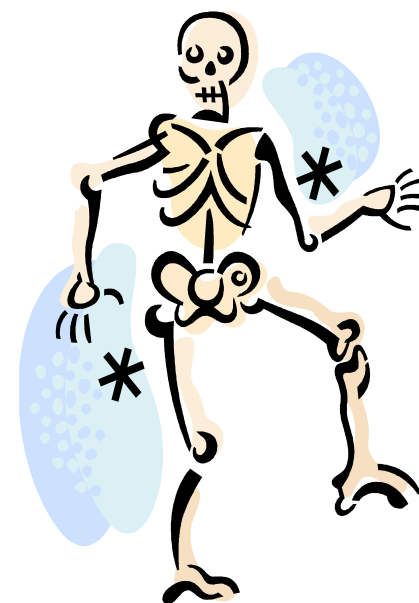
## Communicate/Intellectual Honesty

- ◇ Scientists make the results of their investigations public, even when the results contradict their expectations.

# Science Vocabulary

- Absorb
- Amplify
- Blade
- Bones
- cartilage
- Code
- Compare
- Condensation
- Contract
- Cycle
- Dense
- Describe
- Dissolve
- Drain
- Ecosystem
- Energy
- Evaporate
- Exoskeleton
- Expand
- Flow
- Force
- Fracture
- Frequency
- Function
- Gas
- Habitats
- Inference
- Joints
- ligament
- Liquid
- Matter
- Magnifier
- Model
- Motion
- Muscle
- observation
- Organisms
- phases
- Pitch
- Precipitation
- Predict
- Properties
- Question
- Response
- Seriate
- Sink
- shaft
- Skeleton
- Skull
- Slope
- Soak
- Solid
- Solution
- Sound discrimination
- Sound receiver
- Sound source
- Speed
- Stethoscope
- Stimulus
- Surface area
- Surface tension
- System
- Temperature
- Tension
- Thermometer
- Tendon
- Tools
- Torso
- Vibration
- Volume
- Water cycle
- Water quality
- Water vapor

## Tacoma Priority Science Standards 2011-12 for Third Grade



### Supporting Science at Home

- 1. Keep a science notebook at home for your child to write questions, make observations and record notes.**
- 2. Talk to your child about science that is happening at school.**
- 3. Take advantage of local resources around Tacoma.**

# BIG Picture

The *Tacoma Priority Science Standards* are adapted from The *Washington State Science Standards*.

“The standards are not the curriculum. The standards describe what all students at this grade level are expected to know and be able to do in the area of science.”\* The purpose of this document is to clarify standards taught at each grade level and to provide strong support for students, parents, teachers, and the broader community by guiding the alignment of the school curriculum, instruction and assessment.”

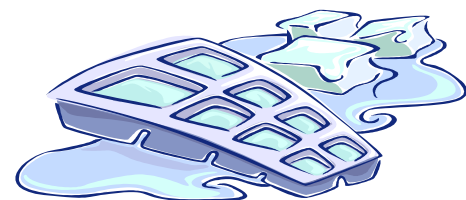
*\*Revised Washington State K-12 Science Standards. Page 1*

# Systems & Application

- ◇ A whole object, plant, or animal can do things that none of its parts can do by themselves.
- ◇ Some objects need to have their parts connected in a certain way if they are to function as a whole.
- ◇ Similar parts may play different roles in different objects, plants, or animals.
- ◇ Simple problems can be solved through a technological design process that includes; defining the problem, gathering information, exploring ideas, making a plan, testing possible solutions to see which is best, and communicating the results.
- ◇ Scientific ideas and discoveries can be applied to solving problems.
- ◇ Tools help scientists see more, measure more accurately, and do things that they could not otherwise accomplish.
- ◇ Successful solutions to problems often depend on selection of the best tools and materials and on previous experience.

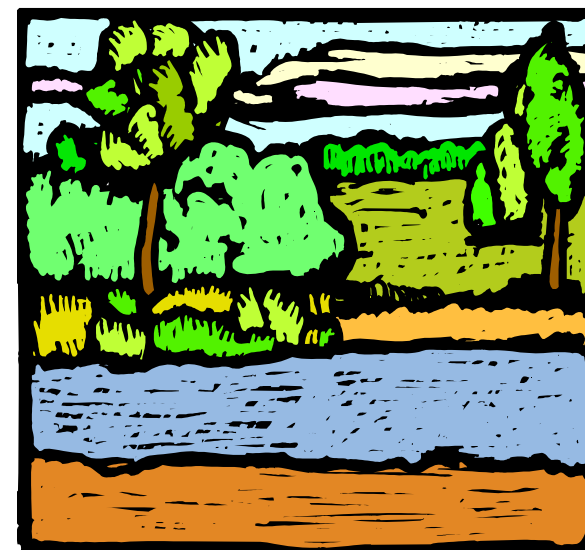
# physical Science

- ◇ Sound, heat and motion are both forms of energy. (Physics of Sound & Water)
- ◇ Water changes state (solid, liquid, gas) when the temperature of the water changes. (Water)
- ◇ Substances can exist in different physical states—solid, liquid, gas. Many substances can be changed from one state to another by heating or cooling. (Water)
- ◇ The amount of water and other liquids left in an open container will decrease over time, but the amount of liquid in a closed container will not change. (Water)
- ◇ The total amount of matter is conserved (stays the same) when it undergoes a physical change such as when an object is broken into tiny pieces, when a solid is dissolved in a liquid, or when matter changes state (solid, liquid, gas). (Water)



# Life Science

- ◇ Plants and animals have different structures and behaviors that serve different functions. (Human Body)
- ◇ Humans impact ecosystems in both positive and negative ways. Humans can help improve the health of ecosystems so that they provide habitats for plants and animals and resources for humans over the long term. For example, if people use fewer resources and recycle waste, there will be fewer negative impacts on natural systems. (Water and Natural Communities)



# Earth & Space Science

- ◇ Water plays an essential role in Earth systems, including shaping landforms. (Water and Natural Communities)
- ◇ Water can be a liquid or solid and can go back and forth from one form to another. If water is turned into ice and then the ice is allowed to melt, the amount of water will be the same as it was before freezing. Water occurs in the air as rain, snow, hail, fog, and clouds. (Water)
- ◇ Weather changes from day to day and over the seasons. Weather can be described by measurable quantities, such as temperature and precipitation. (Water)
- ◇ The Moon can sometimes be seen during the day and sometimes during the night. The Moon appears to have different shapes on different days.

