### Course Title: Third Grade Science

**Duration:** 1 semester  
**Frequency:** Daily  
**Revised June 2013**

**Text:** Bob Jones University Press; Science 3 for Christian schools

**Other materials:** teacher created worksheets, *Developing Critical Thinking through Science* (Critical Thinking Books & Software), *Considering God’s Creation* (Eagle’s Wings Educational Materials), concept posters; Great Plains Nature Center Discovery Boxes; overhead projector; ipad apps

**Areas to be evaluated:** Students will be evaluated after each unit for comprehension and mastery of objectives. Problem solving and critical thinking skills will be evaluated through hands on activities and experiments.

**Additional activities:** Hands on activities to demonstrate concepts and science lab activities; observe the lifecycle of a frog; lapbook of animal classifications

**Course objectives:** To develop scientific knowledge, skills, and thinking that equip the student to solve science-related problems; to develop critical thinking skills related to science concepts and experiments; to conduct and analyze outcomes of experiments; to develop a Christian World View concerning the area of science and to understand that God is the Creator of our known universe and world.

**Course explanation:** Students will study animal classification, arachnids, the solar system, and sound

### Unit: 1 Classification of Animal Groups

**Time frame:** 9 weeks

**Additional Resources:**  
- Great Plains Nature Center Discovery Box

**Unit objectives:**  
The Student will:  
- Learn that there are many ways in which objects can be classified  
- Learn that properties are a characteristic of an object and can be used to describe and classify objects and animals  
- Learn the characteristics of vertebrate and invertebrate animals  
- Learn the characteristics of warm-blooded and cold-blooded animals  
- Learn the characteristics of omnivores, carnivores, and herbivores  
- Learn that vertebrates are classified into five main groups and learn the characteristics of each group; mammals, reptiles, amphibians, fish, birds

**Instructional Methods:** Teacher directed instruction using science text and library books. Teacher will model how to organize written responses to activities. Students will work individually and in pairs to formulate written responses to material read and discussed in class. Students will participate in hands on observation of animal furs, skulls, and tracks.

**Activities:** Students will observe mammal furs, skulls, and tracks from a Discovery Box. Other activities will include making lapbooks, conducting science experiments, and developing written responses to experiments outcome. Guest speaker from Great Plains Nature Center in Wichita will come and give a presentation on Kansas Animals.

**Biblical Integration:** God is the creator and sustainer of our known world and universe. Through the study of science we are able to learn characteristics of God.
**Other Integration: Writing:** Students will write analysis of outcomes of experiments; **Art:** creating visual models of concepts

**Assessment:** Teacher observation, independent practice on worksheets, verbal feedback during class discussion, interaction with peers during classroom activities, scores on worksheets, unit review and test.

**KCCS:**
- W.3.2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- W.3.4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.
- RI.3.4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
- RI.3.10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.

<table>
<thead>
<tr>
<th>Unit: 2 Arachnids</th>
<th>Unit objectives: The student will:</th>
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<tbody>
<tr>
<td>Time frame: 2 days</td>
<td>• Learn characteristics of arachnids</td>
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<td>• Learn the life cycle of arachnids</td>
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**Instructional Methods:** Teacher directed instruction; Observation and re-teaching of individual students as needed; Students work individually and in pairs to practice and gain understanding.

**Activities:** Students will complete diagram of the anatomy of a spider. Students will create a lapbook component on characteristics of spiders to be integrated into LA unit study of *Charlotte’s We.*

**Biblical Integration:** God is the creator and sustainer of our known world and universe. Through the study of science we are able to learn characteristics of God.

**Other Integration:** **Literature:** relating study of arachnid to literature study of *Charlotte’s Web*; **Writing:** Students will write definitions in lapbook; **Art:** creating visual model of concept

**Assessment:** Teacher observation, independent practice on worksheets, verbal feedback during class discussion, interaction with peers during classroom activities

**KCCS:**
- W.3.4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.

<table>
<thead>
<tr>
<th>Unit: 3 Solar System</th>
<th>Unit objectives: The Student will:</th>
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<tbody>
<tr>
<td>Time frame: 4 weeks</td>
<td>• Learn that God created the heaven and the earth</td>
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<td>• Learn that God had an orderly plan with which the universe and our solar system were formed; it did not occur by chance or random occurrence.</td>
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<td></td>
<td>• Learn that the solar system is made up eight planets that rotate around the sun</td>
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</tbody>
</table>
- Learn the order of the planets
- Learn that when a planet makes a full rotation on its axis it is called a day
- Learn that when a planet completes a full orbit around the sun it is called a year.
- Learn that our solar system is located within the Milky Way
- Compare and contrast characteristics of the eight planets
- Learn the characteristics of comets, meteors, and meteorites

**Instructional Methods:** Teacher directed instruction; Observation and re-teaching of individual students as needed; Students work individually and in pairs to practice and gain understanding.

**Activities:** Teacher will model concepts for students and students will participate in individual and group work to reinforce those concepts.

**Biblical Integration:** God is the creator and sustainer of our known world and universe. Through the study of science we are able to learn characteristics of God.

**Other Integration:** **Writing:** students will write a paragraph telling about a planet and its characteristics

**Assessment:** Teacher observation, independent practice on worksheets, verbal feedback during class discussion, interaction with peers during classroom activities; unit review; quizzes and tests

**KCCS:**
W.3.2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
W.3.4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.
RI.3.4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
RI.3.10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.

### Unit: 4
**Sound**

**Time frame:** 3 weeks

**Unit objectives:**
The Student will:

- Learn sound travels in waves
- Learn sound waves are absorbed or reflected
- Learn that an echo results when sound waves are reflected
- Discover that sound travels through gases, liquids, and solids
- Differentiate among sounds that travel through air, water, wood, and metal
- Identify the parts of the ear and explain their function
- Learn the definition of pitch and sound quality
- Discover that the strength of a vibration determines loudness

**Instructional Methods:** Teacher will instruct using science text and directed instruction; Students will participate in hands on experiments; Students work individually and in pairs to practice and gain understanding of concepts.

**Activities:** Students will participate in whole group and independent reading on the concept of sound and sound waves. Students will participate in groups conducting hands on experiments on sound. Students will organize written responses to the outcomes of their experiments.

**Biblical Integration:** God is the creator and sustainer of our known world and universe. Through the study of science we are able to learn characteristics of God.
| **Assessment:** | Teacher observation, independent practice on worksheets, verbal feedback during class discussion, interaction with peers during classroom activities; unit review; quizzes and tests |
| **KCCS:** | RI.3.1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. RI.3.4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area. RI.3.10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently. |