



Creation Lens

Exploring the World, Discovering God

Grade Level: Grade 6

Title:

Using Maps, Charts, Graphs to Show Data

Denomination: Catholic

Lesson ID: BAS-G6-02-CA

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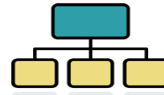
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Note: Web sites referenced in this lesson were valid at time of publication.

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TECHNOLOGY AND BE A SCIENTIST SKILLS - GRADE 6 – CATHOLIC

LESSON TITLE: Using Maps, Charts, Graphs to Show Data

GENERAL CONCEPT: Use of maps, charts, and graphs to show data.

SCIENCE LESSON CONCEPT

- Creating maps, charts, and graphs to show data about Tornado Alley in the USA

GOAL OF SCIENCE LESSON

- To have a greater understanding of the importance of mapping, charting, and graphing to report data.
- To develop skills in mapping, charting, and graphing software programs.
- To understand the data about Tornado Alley using three different criteria.
- To work with a GIS or similar program.

RELIGION LESSON CONCEPT

- Creating maps, charts, and graphs to show data about natural disasters in the Old Testament

GOAL OF RELIGION LESSON

- To develop knowledge about the natural disasters in the Old Testament.
- To develop greater skill in using mapping, charting, and graphing software programs.
- To work together in larger groups to find and record the natural disasters in the Old Testament.

OUTCOME EXPECTED

- Students will have a greater understanding of tornadoes and where they occur in the United States.
- Students will have a greater understanding of the reality of living in an area that has tornadoes.
- Students will be able to work with a GIS or similar program and explain what they are doing and what they understand from the map, chart, or graph.

MATERIALS NEEDED

- Computer
- GIS or similar program (free ALSEE program from ESRI - see Science Links section)
- Projector
- Video clip of a tornado
- Science Journal page: Tornado Alley
- Pen or pencil

OUTCOME EXPECTED

- Students will have greater skill in using a mapping, charting, or graphing program.
- Students will have greater understanding of the weather conditions and natural disasters found in the Old Testament.
- Students will develop skills for working in a large group.

MATERIALS NEEDED

- Old Testament
- Computer
- Charting, mapping, graphing program
- Printer
- Religion Notebook
- Pen or pencil
- List of biblical weather and natural disaster references (see Religion Links section)

SCIENCE METHODOLOGY

- **SHOW** a video clip of a tornado.
- **ASK:** What dangers to human life and property could this tornado bring? (injury, death, damage to structures, total destruction of structures)
- **TELL** the students that they will be working with an assigned partner using a specific (GIS or similar program) computer software program to develop a presentation on Tornado Alley.
- **DEFINE** the term “Tornado Alley”.
- **EXPLAIN AND DEMONSTRATE** how to use the computer program.
- **ASSIGN** partners.
- **GIVE** each student a copy of the directions and guidelines including due date for doing the project.
- **EXPLAIN** the guidelines and directions thoroughly.
- **PUT** the students to work.
- **MONITOR** their activity closely.
- **HAVE** each pair of students present the graphs, maps, and charts that illustrate what they have learned about Tornado Alley using the projector.

RELIGION METHODOLOGY

- **ASK:** What weather conditions and natural disasters are recorded in the Bible?
- **RECORD** student answers. (Noah and the flood)
- **ASSIGN** the students to work in groups of 5 or 6.
- **ASSIGN** each group a particular weather condition mentioned in the Old Testament:

Earthquakes and fire
Snow, cold, frost and hailstones
Lightning
Wind, rain, storms
Famine and plagues
Floods and droughts
- **GIVE** each group a list of several Biblical references to read and to take notes. (see Religion Links section)
- **HAVE** each group create a map, chart, or graph using a GIS or similar program showing how many disasters of these types are related in the Scripture passages assigned to them.
- **EXPLAIN** how to use the GIS or similar program.
- **MONITOR** the progress of each group.
- **HAVE** the groups give a presentation of their findings to the class.

- **HAVE** the students take notes on the Science Journal page: Tornado Alley.
- **DISCUSS** and list the conclusions of the groups.
- **POSIT:** Maps, charts, and graphs are effective tools used by scientists to record and present data.

- **HAVE** the students take notes on each presentation.
- **DISCUSS** the role and use of charts, maps, and graphs in collecting and presenting biblical data.
- **POSIT:** Biblical data on weather and natural disasters can be clearly illustrated using charts, maps, and graphs.

SCIENCE LINKS

www.internet4classrooms.com/skills_6th_science_tx.htm

[Science Knowledge and Skills - 6th grade](#) Science Knowledge & Skills - 6th Grade. Scientific Processes | Science Concepts ... (E) construct graphs, tables, maps, and charts using tools including ... Good activities for further use of map, chart, and graph skills.

www.mapcruzin.com/free-gis-software-tools.htm

Free GIS mapping software program applications and resources.

RELIGION LINKS

www.dianedew.com/weather.htm lists many biblical references for weather conditions and natural disasters.

www.answers.yahoo.com/question/index?qid=20110315175305AAoRBJ4

What does the Old Testament say about natural disaster...There are a number of OT passages that indicate.....A detailed listing of Scriptural passages.

SCRIPTURE PASSAGES FOR EACH TYPE OF DISASTER:

EARTHQUAKES AND FIRES

Isaiah 29:6 ff; Psalm 18:6ff; Genesis 19:24 ff; Ezechiel 11:1 ff; Ezechiel 20: 45 ff; Zechariah 11:1 ff; Zechariah 14: 3 ff

SNOW, COLD, FROST, HAILSTONES

Psalm 78: 47-48; Job 37:6 ff; Joshua 10:11 ff; Psalm 105: 32; Isaiah 30:30; Ezechiel 13; 13; Ezechiel 38: 22; Joel 2: 23; Amos 4:7; Haggai 2: 17

WIND, RAIN, STORMS

Genesis 8: 1-2; Exodus 10;12-13; Exodus 10: 19; Exodus 14; 21; Exodus 15; 10; Numbers 11: 31; Isaiah 11: 15; Psalm 48: 7; Psalm 78:26; Psalm 147: 18; Jeremiah 51: 1; Ezechiel 13: 13; Jonah 12: 4; Jonah 4: 8

FLOODS AND DROUGHTS

Psalm 18: 6; Psalm 77: 16; Genesis 2: 5; Genesis 6: 7-8; Leviticus 26: 4; Deuteronomy 11: 17; Deuteronomy 28: 12; 1

Samuel 12: 17-18; 2 Samuel 1: 21; 1 Kings 8: 35-36; 2 Chronicles 6: 26-27; 1 Kings 17: 14; Job 27: 6; Psalm 11: 6; Psalm 68:9; Psalm 74:15; Isaiah 5: 6; Isaiah 30:23; Jeremiah 10: 13; Psalm 1: 8; Haggai 1: 11; Zechariah 14: 17-18;

FAMINES AND PLAGUES

Ruth 1: 1; Joel 1: 1; Psalm 105: 16; Ezechiel 5: 16-17' Ezechiel 14: 13, 21; Jeremiah 24: 10; Jeremiah 27: 8; 2 Samuel 21: 1; Exodus 8: 1; 1 Samuel 21: 1

NOTE: The teacher may wish to limit the number of Scripture passages so that each group's work is balanced.

KEY WORDS

- CHART
- GRAPH
- MAP
- DATA
- INTERPRET
- TORNADO ALLEY
- TORNADO
- GIS PROGRAM

KEY WORDS

- BIBLICAL TIMES
- NATURAL DISASTERS
- DISASTERS
- WEATHER EVENTS
- OLD TESTAMENT