Land Uses

Grades: 4-6
Subjects: Social Studies, Communication Arts
Approximate Time: 2-3 days
Montana Standards: Communication Arts 1; Social Studies 1, 3.

Objectives: Students will

- Identify the four different ways land is used
- Determine what lives on and what kinds of activities go on in the different types of land.
- Learn about land use planning and how to use maps to determine elevations, ranges, townships, sections, and latitude and longitude lines.

Materials Needed:

- Topographic map handout
- Grid map handout
- Think About handouts
- Interactive grid map activity: http://www.eduplace.com/kids/socsci/books/applications/imaps/maps/g2_u1/index.html
- Website explaining the grid system (ranges, townships): http://netzcool.com/real-estate/government-survey-system/townships

Keywords:

Elevation, ranges, townships, sections, latitude, longitude, acre, baseline, land use, urban area, rangeland, farmland, forestland

Brief Description:

There are four different kinds of ways we utilize our land. Each is important to our lives and each provides us with different things. They are urban areas, farmlands, forestland, and rangelands.

Land use planning is any thought, logic, or planning that is applied to the use of a portion of the Earth's surface. Montana has 93 million acres of land area. Only about 62 million acres are suitable for crop and livestock production. This is because of natural limitations such as erosion, water levels, and climate.

An interstate highway takes up 36 acres of land for every mile of road. Road construction often leaves some isolated and hard-to-farm parcels of land. Therefore it is important to plan the use of land wisely. Land use planning is a method used by communities to

designate what will be allowed to happen to the land. It involves the study of the geology, and area's history, and the community needs.

All land west of the Mississippi and Ohio rivers has been surveyed using the Land Office Grid System. These are based on a grid which is similar to latitude and longitude lines. Ranges are 6-mile wide strips of land numbered north or south of a baseline. Townships are also 6 miles wide and are numbered east and west from an established Principal Meridian line. The 6-mile x 6-mile block is called a township. Each township has 36 sections. A section is 1 mile x 1 mile square. Each part of the land can be legally described. An example would be NE ¼, NW ¼, Sec 19, T35, R2W. Written out it would translate to Northeast ¼ Northwest ¼ of Section 19, Township 35 and Range 2 West.

Lesson:

1. Discuss the four different kinds of land uses. Give students the Think About handouts and have them talk to each other to figure out what kinds of things they picture when they think about the different kinds of land uses.
2. Explain that land use planning is important because if planned poorly, an area can have a lot of wasted space that could have been very productive.
3. Tell students that geology and landforms can help determine the use of an area. Handout the topographic map and have them identify different elevations in different areas.
4. Explain about the Land Office Grid System (What is a range? A township? An acre? A section?) Have students do the online interactive grid activity listed in the Materials Needed Section and see if they can find the different buildings by using the grid system.

Assessment:

Students will be able to identify what kinds of things are in the different types of land. They will be able to figure what elevation a piece of land is on a topographic map, as well as use the Grid Map system.

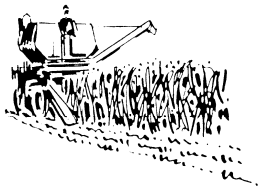
Land Uses in Montana

There are four main kinds of land: Urban areas, Forest lands, Farmlands, and Rangelands. Each kind is important in our lives in different ways!

Think about cities!

Are you thinking about -- (check yes or no):

	Yes	No
Lots of people	____	____
Streets, cement	____	____
Wild animals	____	____
Cow, sheep, horses	____	____
Rivers and lakes for fishing	____	____
Factories and stores	____	____
Big fields of grain	____	____
Lots of tractors and equipment	____	____
Some dogs on leash	____	____
Lots and lots of big trees	____	____
Loggers	____	____
Businessmen	____	____
Cowboys	____	____
Farmers	____	____



Think about forestland!

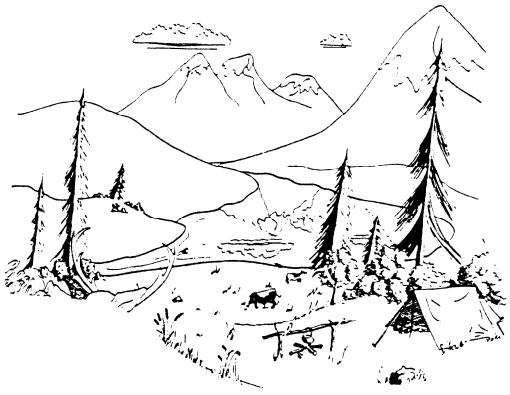
Are you thinking about -- (check yes or no):

	Yes	No
Lots of people	____	____
Streets, cement	____	____
Wild animals	____	____
Cow, sheep, horses	____	____
Rivers and lakes for fishing	____	____
Factories and stores	____	____
Big fields of grain	____	____
Lots of tractors and equipment	____	____
Some dogs on leash	____	____
Lots and lots of big trees	____	____
Loggers	____	____
Businessmen	____	____
Cowboys	____	____
Farmers	____	____

Think about farmland!

Are you thinking about -- (check yes or no):

	Yes	No
Lots of people	____	____
Streets, cement	____	____
Wild animals	____	____
Cow, sheep, horses	____	____
Rivers and lakes for fishing	____	____
Factories and stores	____	____
Big fields of grain	____	____
Lots of tractors and equipment	____	____
Some dogs on leash	____	____
Lots and lots of big trees	____	____
Loggers	____	____
Businessmen	____	____
Cowboys	____	____
Farmers	____	____

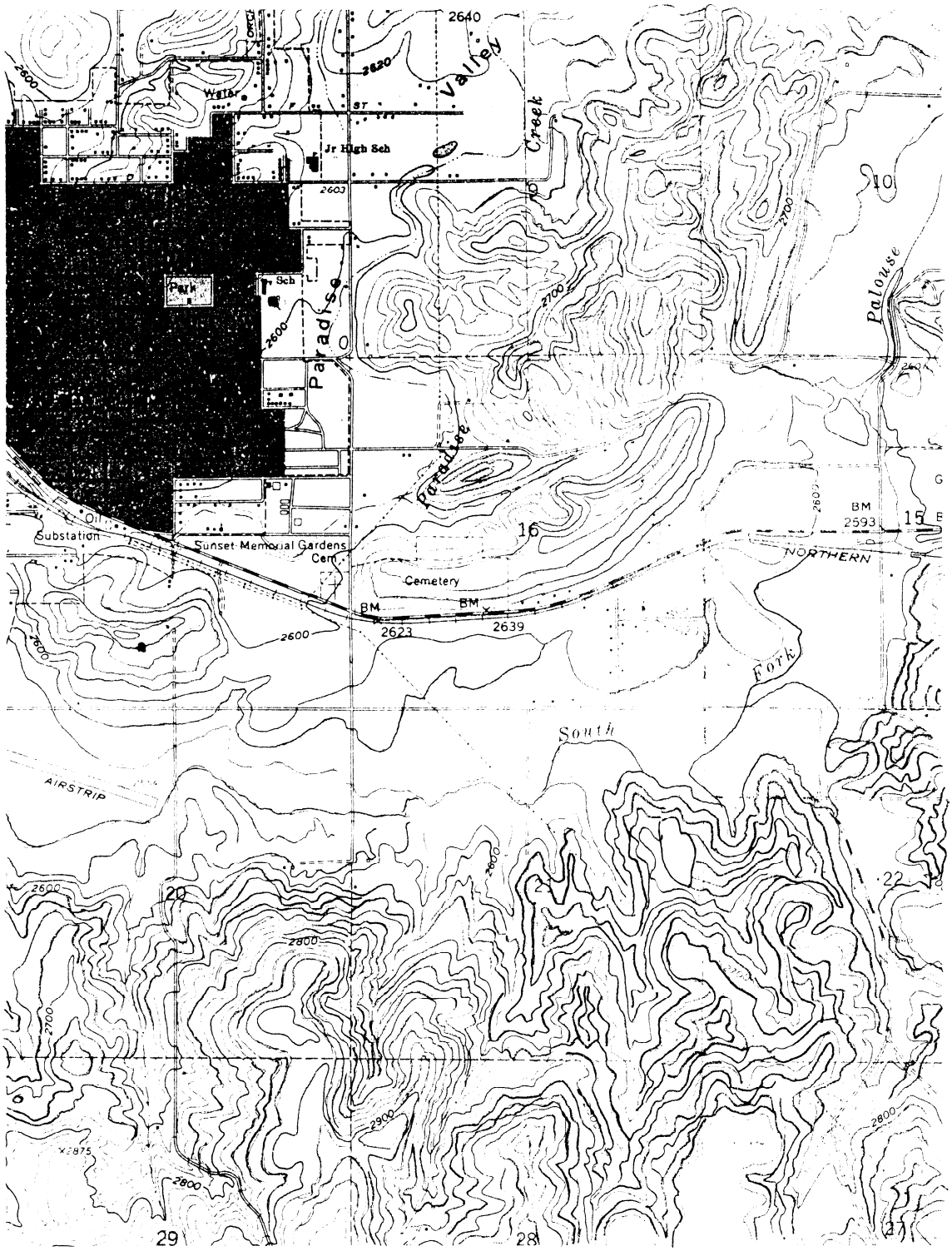


Think about rangelands!

Are you thinking about -- (check yes or no):

	Yes	No
Lots of people	____	____
Streets, cement	____	____
Wild animals	____	____
Cow, sheep, horses	____	____
Rivers and lakes for fishing	____	____
Factories and stores	____	____
Big fields of grain	____	____
Lots of tractors and equipment	____	____
Some dogs on leash	____	____
Lots and lots of big trees	____	____
Loggers	____	____
Businessmen	____	____
Cowboys	____	____
Farmers	____	____

Can you see the different elevations? Where do you think the mountains are? The Valleys?



THEORETICAL
TOWNSHIP DIAGRAM
SHOWING
METHOD OF NUMBERING SECTIONS
WITH ADJOINING SECTIONS

36 80 Ch.	31	32	33 6 Miles —	34 480 Chains	35	36	31 80 Ch.
1	6	5	4	3	2	1	6
12	7	8	9	10	11	12	7
13	18	17	16	15	14	13	18
24	19	20	21	22	23	24	19
25	30	29	28	27	26	25	30
36	31	32	33	34	35	36	31
1	6	5	4	3	2	1	6

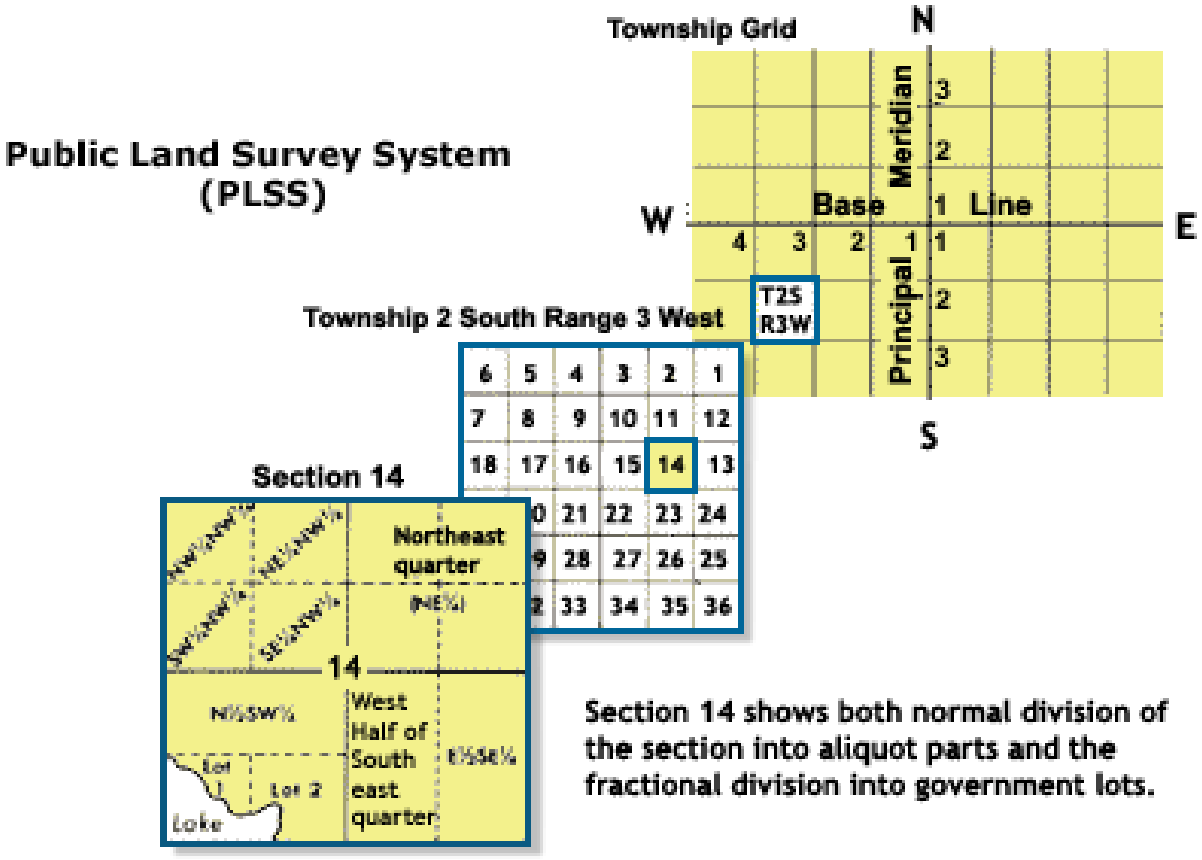
1 Mile

80 Ch.

6 Miles — 480 Chains

T.V.S.

For Teacher Use
Examples of Public Land Survey System



Quantity	Unit	is equal to	Conversion Factor	Reference Unit
1	acre	=	43560	square feet
1	section	=	640	acres
1	township	=	23040	acres