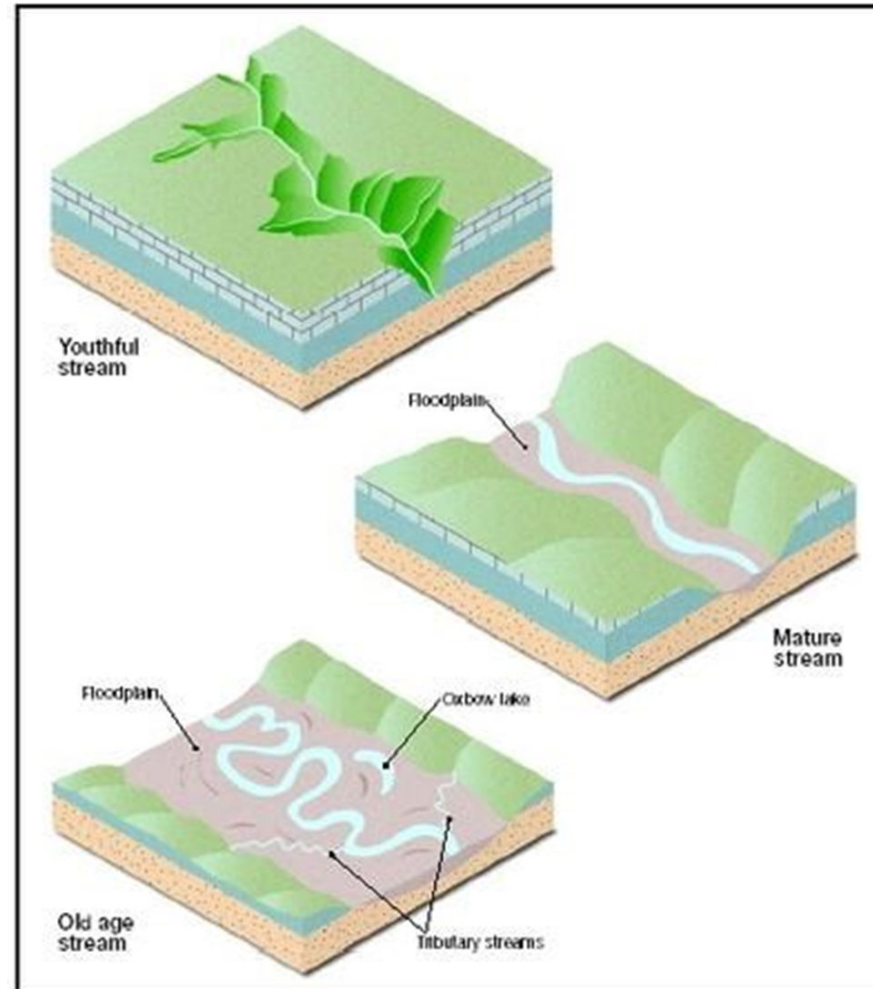


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|--------------------------|--|
| Lesson Title | Lesson 2 – Age of Rivers |
| Time | 1 - 50 min class period |
| Resources | <ul style="list-style-type: none"> ● Age of Rivers Notes PowerPoint ● White boards/dry erase markers OR large paper/markers |
| Objective | SWBAT discuss how a river changes over time. |
| Standard | HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes. |
| Plan | <p>Introduction (10 min)</p> <ul style="list-style-type: none"> ● Review River Anatomy vocabulary from Lesson 1 – Quizlet Live, Kahoot, Gimkit, bingo, etc. <p>Notes (15 min)</p> <ul style="list-style-type: none"> ● Present the Age of Rivers Notes. ● Have students take their own notes or create guided notes for students to complete. <p>Activity (15 min)</p> <ul style="list-style-type: none"> ● Students will work in pairs or triads to draw each of the 3 ages of rivers – young, mature, and old age. ● Students can use whiteboard markers on the desks/white boards, markers and butcher paper, or a device. ● For each river (young, mature, and old age), students will label the age and describe the main characteristics of that age. ● Students should additionally label each rivers headwaters, meander, cutbank, point bar, and mouth. <p>Closing (10 min)</p> <ul style="list-style-type: none"> ● Groups will share their work with a different group and describe their three rivers to them. |
| Authors | Amanda Oanes and Jill Wold – West Fargo Public Schools |
| Acknowledgements: | The curriculum was developed under National Science Foundation RET grant #1953102. However, these contents do not necessarily represent the policies of the National Science Foundation, and you should not assume endorsement by the federal government. |



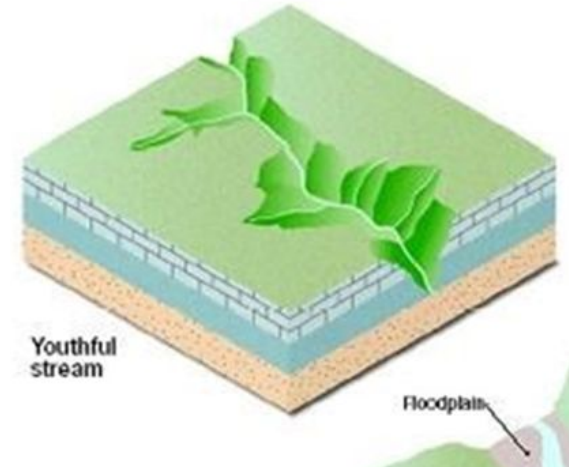
Age of Rivers

SWBAT discuss how a river changes over time.



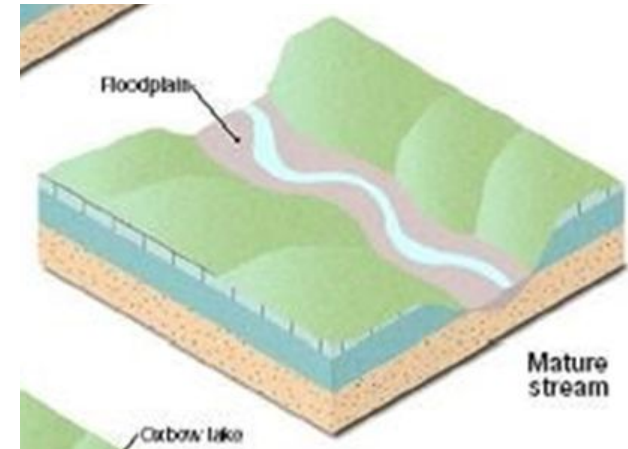
Young Stream

- Steep gradient
- Very few tributaries
- Flows quickly – white water rapids, waterfalls
- Channels erode deeper rather than wider
- Example: Rivers in mountainous regions



Mature Stream

- Gradient is less steep
- Flows more slowly
- Fed by many tributaries
- More discharge than a youthful stream
- Channels erode wider rather than deeper
- Well developed flood plain
- Example: Mississippi River



Old-Age Stream

- River with a low gradient (1-2 ft/mile)
- Low erosive energy
- Very wide valley
- Flood plains with levees
- Lots of deposition of sediment
- Oxbows
- Example: Red River

