

Standards

- SCI.I.1.MS.5 Use sources of information in support of scientific investigations.
- SCI.V.1.MS.3 Explain how rocks are broken down, how soil is formed, and how surface features change.

Middle School Science Curriculum

My curriculum is broken into several parts. First, the actual curriculum is divided into 5 sections: Science 8 Curriculum, Scope & Sequence, Course Curriculum & Syllabus, MI CLiMB Unit Correlation, and Science Units. This written by several teachers in Wayne-Westland, including my own, and the curriculum is quite obviously still under development.

The MI CLiMB Unit Correlation section gives very good applications and assessments. They are laid out clearly with rubrics students can use themselves to assess their own learning. They could be considered too explicit if they were taken to be “the test” that must be given instead of ideas of good tests that could be given. While there are many good assessments, that section in the unit I am analyzing is empty. I feel the struggle between specific lesson plans teachers can use directly in their classrooms (but which might seem constraining) and general ideas that are perhaps too vague to be useful to teachers is one which any curriculum designer must face.

The Science Unit section does talk about some activities, but not in a logical or strategic sequence. The activities focus on mostly on maps. I think a visit somewhere to observe geologic features would be useful. There are many more, better, and logically linked activities in *Science Plus*.

The other *Curriculum* sections talk more about the whole course than my unit.

Science Plus: Technology and Society

Science Plus is a collection of several resources: a text book, teacher’s guide, work book, source book, test generator, assessment booklet, videodisc collection, and transparency packet. I am impressed by many facets of this curriculum supplement: the many varied and connected activities; the lesson organizer with its vocabulary, resource list, and collected materials list; the many links to other parts of this and other courses; the sections for helping learners who are either slower or faster or have reduced English skills (although I feel that teachers with ESL students should learn

those languages); and especially the consistent use of higher order thinking skills required of the students.

I like that the activities are presented in a logical and strategic sequence. For example, there are a number of activities on fault lines and earthquakes. This starts with the opening of the unit with a preview discussion on damage caused in California (pg. 353). A couple days later, the students use material from lecture to discuss pictures of layered rock which has been distorted by earthquakes (pp 360). Students model faults and folds in an activity (pg. 361). In a reteaching section, students model this again with index cards (pg. 361). All of the previously mentioned activities are starting before the lesson “The Earth Breaks Apart.” The lesson itself starts with a picture study of a fence broken apart by an earthquake which the students write about in their journal and then discuss (pg. 362). This is followed with another clay modeling activity (pg. 363), a picture study of an ariel photograph (pg. 364), and a teaching exercise to explain the concepts to a student who had missed class (pg. 365). On several further pages, the models and knowledge they have gained is used (pp 367, 391, 397, 399). The way many of these activities are developed in the teacher’s guide, they allow students to express ideas, hypothesize, develop explanations, and interpret data. They also guide the student to be able to conduct additional experiments.

The content seems accurate to me. They do say “volcanic activity was responsible for the creation of the Earth’s planetary crust,” which I am not sure is entirely accurate (pg. 377). I’ve also read about the Paricutín volcano, and in the account I read the farmer’s plow got stuck in the beginnings of that volcano, that the magma was building, but that it was the disruption of the plow that broke the final symmetry. In this account “they noticed white fumes,” saying nothing of the possible effect of the plow and losing a teachable moment (pg. 375). I was impressed with the story of granite man (pg. 392) which I felt did a good job of presenting facts in a fun story. Now I do need to say that an evaluation of accuracy does require reading the entire book because even a few scattered errors make a student’s job much harder.

It is clear that the students attempt to motivate the students and give a sense of overall purpose. Sometimes I feel they succeed (pg. 370--first hand account of a volcano), other times not.

Conclusion

I feel that taken together, the *Curriculum* and *Science Plus* make a good curriculum.

References

- Bozyk, L., Cady, J., Christianson, D., Drews, K., German, C., Glowzinski, S., Henzi, C., Janke, J., Kaminski, D., Niedermeyer, S., Priest, L., Ribits, F., Richardson, S., Simons, S., Stefko-Brown, B., Walker, F., & vanCampenhout, J. (2002). *Middle school science curriculum*. Wayne-Westland Community Schools.
- Morrison, E., Moore, A., Armour, N., Hammond, A., Haysom, J., Nicoll, E., & Smyth, M. (1997). *Science plus: technology and society: annotated teacher's edition*. Orlando: Holt, Rinehart and Winston, Inc.