

***T&L 2900 – Science Course Options:  
Ants, Plants, and Puppy Dog Toes  
Earth & Sky Secrets for Young Minds  
Everyday Science Stuff Around Us  
How Does Life Science Affect Me?  
Science for Beginning Einsteins***

**Courses at a Glance**

**Instructor:** Dave Seela

**Length:** 15, 30, or 45 Hours

**Dates:** Enroll Anytime – Complete in 4 months

**Number of Professional Development Credits:** 1, 2, or 3 from the University of North Dakota

**Introduction**

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These courses allow teachers to learn at their own pace, on their own schedule, and from their own home or classroom. The courses offer a complete set of hands-on lessons centered on a single conceptual unit of instruction. By selecting to do a course, the teacher can increase their science knowledge and improve their science curriculum at the same time because the teacher, as the purchaser, can use these lessons for their personal classroom use. These courses are appropriate for teachers, grades K-2.

For the teacher to receive their credit, there is a list of assessment requirements. Think of these like a “menu” of learning enhancements designed to help the teacher become more proficient in a specific content area. This lets the professional take advantage of their personal learning skills and methods. But more importantly they can improve their student’s performance in real science learning. The number of credits available (1, 2, or 3) is associated with the number of hours and work required to receive the credit. For example, if the elected/preferred number of credits is 3, teachers will be required to complete more lessons along with related assessments and summaries.

We highly encourage the trained professional to get their students involved in the research, the thinking, the learning, the experimentation, and especially the FUN of learning science in a “hands-on” approach. The teacher is encouraged to have their students become part of the process of science learning. These lessons are designed to do just that.

These self-paced courses can be started and completed at the student’s own leisure **within four months from the UND course registration date.**

## Course Objectives

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The purpose of these online courses is for participants to gain strategies and techniques to help them motivate their students about and succeed in learning applied science.

## Learning Objectives

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- to bring “real-life” applied science into the classroom
- allow teachers and students to use constructivist learning for real hands-on science
- gives the professional educator help with what is needed to enhance their natural teaching skills in a given area.
- allow for multi-level learning skills to address the concept
- train teachers in ways to identify cross-curricular ties to each science concept so students realize everything is connected
- train teachers to recognize relevant STEM applications

## Session Highlights

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After enrollees have finished a lesson, they will identify reading level readers for the lessons and identify the reading level for each reader. Enrollees will also identify horizontal curriculum connections related to the lessons and will produce a written report on what was researched, including a plan on how to implement the readers and horizontal connections.

## Course Materials

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All course content is online within each course or will be provided in PDF form.

**Technical Requirements** – A computer with high speed internet access and an active email account are required for this course.

## Assignments

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- Do Lesson Plans
- Identify reading level readers for lessons
- Identify reading levels for readers
- Identify horizontal curriculum connections related to lessons
- Produce a written report

## Grading & Grading Criteria

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**These online courses use Letter Grading (A – F) or Satisfactory/Unsatisfactory (S/U). The grading option must be selected at the time of course registration.**

Grading will be assessed on the following criteria:

- A or S: 1) Produce a single spaced 1/4 page summary of each science activity stating observations and results.  
2) Produce a single spaced minimum of full page summary of how you would utilize this group of horizontal curriculum connections and leveled readers in your classroom.
- B or S: 1) Produce a single spaced 1/4 page summary of each science activity stating observations and results.  
2) Produce a single spaced 1/2 page summary of how you would utilize this group of horizontal curriculum connections and leveled readers in your classroom.
- C or S: 1) Produce a single spaced 1/4 page summary of each science activity stating observations and results.  
2) Produce a single spaced 1/4 page summary of how you would utilize this group of horizontal curriculum connections and leveled readers in your classroom.
- F or U: Failure to comply with criteria

### **Scholastic Dishonesty**

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Students enrolled in a course(s) are expected to be aware of the seriousness of scholastic dishonesty. Unacceptable behavior such as submitting someone else's work as your own, cheating on exams, or plagiarizing can result in failure of the course or other sanctions. For a more detailed description of these policies, please refer to the UND Code of Student Life; Appendix IIIa-3, at: <http://und.edu/student-affairs/code-of-student-life/>