

**Title**

Searching and Researching on the Internet (formerly Tech170)

**Target Audience**

This course is intended for in-service teachers of grades K-12.

**Prerequisites**

To successfully participate and complete the assignments in this course, the learner must:

- Have past experience using the classroom computer.
- Have past experience working with the Internet.
- Be familiar with taking an online course or have completed the PBS “Practice Learning Online with Teacherline” course.
- Be familiar with elementary, middle, or high school educational content.

**Course Description**

In this course, you will learn how search engines work and will practice using them to conduct effective online research with your students. You will learn about specific search engines designed for educators and students. You will acquire skills to conduct effective online searching techniques both in and out of the classroom. You will also explore issues of Web ethics, such as e-cheating and plagiarism. Finally, you will create a lesson plan for students to conduct Web research in your classroom.

**Instructor/Facilitator**

See instructor/facilitator sheet

**Credits**

To be determined by college or university

**Goals**

In this course learners will learn how to find available resources on the Web, the difference between search engines and directories, how to get effective results, and how to incorporate searching and researching on the Internet into their teaching practice and their classroom.

At the end of this course, learners will:

- Know how search engines differ from one another.
- Understand and incorporate strategies for effective online research.
- Have learned about searching tools specifically designed for educators to help students search and research on the Internet.
- Have learned strategies and developed techniques to help them when they suspect plagiarism.
- Have created and implemented a lesson plan for students to conduct Web research in the classroom.



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## **Outline of Content and Assignments**

After previewing the documents in the Course Information area, learners will proceed to Course Content to complete the following six sessions, working through each session in order. Throughout the sessions, learners are asked to articulate their ideas in various forms: they are encouraged to reflect on their ideas and experiences in their online journal; the discussions in the discussion forum are designed to allow learners to glean information from other learners' experiences. As a final project, learners will determine Web searching learning goals for their students, create a research proposal for a classroom curriculum topic, and then develop and implement a Student Web Research lesson plan in the classroom or with a group of students.

This course is designed to address ISTE's *Educational Technology Standards and Performance Indicators for All Teachers*. These standards define the fundamental concepts, knowledge, skills, and attitudes for applying technology in educational settings.

This course specifically addresses the following ISTE NETS\*T:

### **II. PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES.**

*Teachers plan and design effective learning environments and experiences supported by technology. Teachers:*

- A. design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
- C. identify and locate technology resources and evaluate them for accuracy and suitability.
- D. plan for the management of technology resources within the context of learning activities.
- E. plan strategies to manage student learning in a technology-enhanced environment.

### **III. TEACHING, LEARNING, AND THE CURRICULUM.**

*Teachers implement curriculum plans, that include methods and strategies for applying technology to maximize student learning. Teachers:*

- A. facilitate technology-enhanced experiences that address content standards and student technology standards.
- B. use technology to support learner-centered strategies that address the diverse needs of students.
- C. apply technology to develop students' higher order skills and creativity.

### **V. PRODUCTIVITY AND PROFESSIONAL PRACTICE.**

*Teachers use technology to enhance their productivity and professional practice. Teachers:*

- C. apply technology to increase productivity.

### **VI. SOCIAL, ETHICAL, LEGAL, AND HUMAN ISSUES.**

*Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice. Teachers:*

- A. model and teach legal and ethical practice related to technology use.
- D. promote safe and healthy use of technology resources.

Visit [cnets.iste.org](http://cnets.iste.org) for a full list of the ISTE's *Educational Technology Standards and Performance Indicators for All Teachers* and more information about these standards.



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**Session 1: Online Search Basics**

In this session, learners will introduce themselves to fellow students in the discussion forum and set some goals and questions to guide their learning in this course. In addition, they will begin to explore Web searching resources by conducting a search themselves and identify differences between these resources.

By the end of this session, learners will be able to:

- Define their professional goals and expectations for this course in their online journal.
- Explain their prior knowledge and experiences about teaching narrative and expository comprehension in their online journal.
- Explain and discuss their experiences using Web search engines to conduct searches on the Internet.
- Analyze and reflect on the different Web searching tools and engines for use in the classroom.

Write in online journal

- Reflect on expectations for the course.
- Reflect on prior knowledge and experiences searching and researching online.
- Reflect on tools for searching on the Web.

Participate in an online discussion

- Introduce themselves to other learners in a "Get to Know Each Other" forum.
- Discuss the Searching the Web Activity.

Complete activity

- Searching the Web Activity

View video

- "Search Engines: Part I."

Read

- "Search the Web More Efficiently, Parts 1 and 2."

**Session 2: Effective Online Searching**

In this session, learners will study effective online searching strategies and techniques, practice using online searching strategies, and then analyze the use of search engines in the classroom.

By the end of this session, learners will be able to:

- Select and explain useful strategies to evaluate Web sites.
- Select and apply effective online searching strategies that your students will use for their own Web research.
- Analyze and reflect on the effectiveness of the search engines used in the Web research activity.

Complete activities

- Search Strategies Interactive
- Web Searching Activity

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Read

- "How to: Maximize Google."
- "Search the Web More Efficiently: Parts 3-5."

Explore

- "Search Strategies" Interactive

View video

- "Search Engines: Part II."

Write in online journal

- Reflect on ways to evaluate Web sites.

Participate in an online discussion

- Discuss the Web Searching Activity.

Session 3: Web Searching for Educators

In this session, learners will discuss and identify specific Web research tools for students and educators, as well as analyze ways to bring searching strategies into the classroom.

By the end of this session, learners will be able to:

- Reflect on ways to bring online search strategies into your classroom.
- Identify learning goals for your classroom, search techniques to be taught, and assessment strategies to be implemented.
- Assess and provide feedback to research proposals and/or research questions proposed by your peers in the discussion forum.

View video

- "Student Perspectives: Metacrawler vs. AltaVista."

Write in online journal

- Reflect on the types of activities they can have their students do as a result of online searching.
- Reflect on the following: "What kind of learning goals do you think are important for students to achieve as a result of Web research?"

Read

- "Metasearching the Net."

Complete assignments/activity

- Learning Goals Assignment.
- Student Research Activity.

Participate in an online discussion

- Post the following: research activity or questions, URLs of the sites that provided answers to their research proposal or questions, a brief description of their search techniques, and the strengths and the weaknesses of their search.



#### Session 4: Portals, Bookmarks, and Other Organizational Tips

In this session, learners will learn about technological tools that can help them organize and focus Web research projects.

By the end of this session, learners will be able to:

- Identify, employ, and discuss research portals, bookmarks, and other organizational tips that your students will use in the student Web research lesson plan.
- Analyze and discuss the effectiveness of using research portals and bookmarks with your students.

##### Complete Activities

- Explore the Plug-Ins interactive.
- Create a research portal. (not required)

##### Read

- "Creating a Student Research Portal."

##### View Video

- "Book Marking."

##### Participate in an online discussion

- Respond to the following: "How do you plan to incorporate book marking, research portals, and the other classroom organizational tips into your final project and your overall teaching practice? What obstacles do you foresee? What advantages do you foresee?"

#### Session 5: Cheating and the Web

In this session, learners will discuss instances when Web searching leads to cheating and ways to prevent and recognize plagiarism. They will also implement the student Web research project in the classroom.

By the end of this session, learners will be able to:

- Explain how online research can lead to plagiarism and e-cheating and how to prevent it in your classroom.
- Identify and discuss ways to recognize and prevent instances of e-cheating and plagiarism.
- Develop and implement a Web research lesson plan for your students.

##### Read

- "E-cheating: Combating a 21<sup>st</sup> Century Challenge."
- "Models for Student Web-Based Research."
- "Making Search Fun with Internet Scavenger Hunts!" (not required)
- "Kid-Oriented Web Sites: Assigning Internet Research." (not required)

##### Write in online journal

- Reflect on the following: "What did you find most surprising in the article, "e-cheating: Combating a 21<sup>st</sup> Century Challenge?"



- Reflect on what techniques and strategies they think they will bring into the classroom.
- If they are not currently in a classroom, reflect on how they plan on using some of these strategies in the future.

View video

- "Student Perspective: Research Outcomes"

Participate in online discussion

- Write about any experiences they've had with plagiarism or e-cheating. Things to consider are: if they've experienced it before, how did they handle it and what advice would they give to a colleague who suspects a student of e-cheating?
- Respond to the following: "Why do you think the students in the video knew they could not simply cut and paste the information they found online?"
- Discuss what techniques they have found helpful in preventing plagiarism.

Complete assignments

- Final Project Part 1: Student Web Research Lesson Plan (Session 5) and Implementation (by Session 6).

### Session 6: Theory to Practice

This final session will provide learners with the opportunity to pull together all the concepts they have learned during the course through evaluating the implementation of the final project.

By the end of this session, learners will be able to:

- Evaluate the effectiveness of your Web research student project and identify ways to improve or change your project.
- Assess your learning in this course by comparing your prior knowledge and acquired knowledge in a journal activity.
- Analyze the learning experience in this course by reflecting about your professional goals and expectations in the online journal.

Complete assignment

- Final Project Part 1: Student Web Research Lesson Plan Implementation.
- Final Project Part 2: Written Reflection Paper.

Participate in an online discussion

- Post reflection paper.

Write in online journal

- Reflect on the following: "Have you succeeded in learning about the areas you initially identified?"
- Reflect on what is the most important information they learned in this course.
- Reflect on the questions they still have about searching and researching on the Internet.
- Reflect on the new knowledge and techniques that they learned and will be able to apply in their practice.
- Reflect on professional goals and expectations.



**Schedule**

It will take about 30 hours to complete this course. Each session should take approximately 4-5 hours. If you find yourself spending several hours more than this in any given session, please contact your facilitator to make sure this is necessary to complete the given assignments.

**Requirements**

Learners are expected to:

- Complete all assignments.
- Maintain an online journal.
- Participate and actively engage in discussions with fellow learners while contributing to the social construction of knowledge.
- Be self-directed and self motivated.
- Ask for assistance when they need it.

**Materials** (hardware, software, plug-ins)

**Technical Requirements**

- Word processor
- Internet service provider
- E-mail

**Academic Dishonesty Policy**

To be inserted by university institution only

**Evaluation**

This course can be taken for graduate credit on a pass/fail basis, or for a letter grade and graduate credit. See graduate credit details pertaining to specific graduate credit institutions.

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