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1. INTRODUCTION

The Southeast Regional Climate Center (SERCC) maintains an outreach program that meets the weather and climate-related needs of the K-12 educational community (St. Claire and Warthan 1997). To help support this objective, the SERCC has developed a number of web-based products whose purpose is both to educate the user on the basics of weather and climate as well as to entertain.

2. "EDUTAINMENT"

Edutainment is defined as something that educates and entertains (Soukhanov 1999). This can include television programs, computer software, or other media content intended to entertain and educate the user at the same time. For the purposes of the SERCC Outreach Program, several types of edutainment resources are available through the SERCC website (www.dnr.state.sc.us/climate/sercc). Many of these resources are interactive in nature and, although some may be more entertainment-oriented than others, each has some element of education that serves to reinforce basic concepts in the atmospheric sciences.

3. PRODUCT TYPES

Each of the web-based edutainment products available on the SERCC website fall into one of three basic categories: games, activities, or resources.

3.1 Games

Many of the games featured on the SERCC website employ the use of a Java applet to create an interactive user interface. Examples of games currently available on the SERCC website include a version of the classic game concentration that

exposes users to common symbols used in synoptic weather maps (Figure 1), a slider puzzle that features satellite images of major hurricanes, and a wordsearch puzzle in which users search for a variety of words related to ultraviolet radiation (Figure 2).

Weather Symbols Concentration

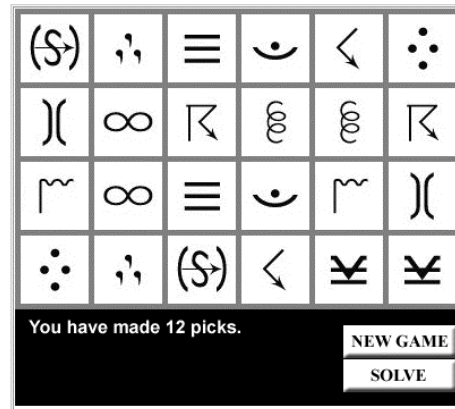


Figure 1. Weather Symbols Concentration game.

SERCC Wordsearch

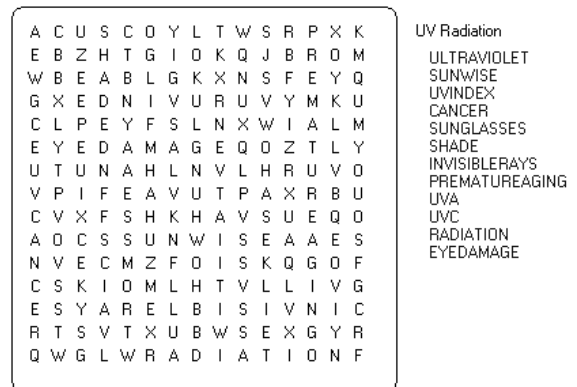


Figure 2. An interactive wordsearch puzzle.

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3.2 Activities

Activities available on the SERCC website provide the same level of edutainment as the games, but in a more general context. An example of an activity is the SERCC Coloring Book (Figure 3), which uses a Java applet and simple line drawings to allow users to explore their creativity while gaining familiarity with objects and concepts related to weather and climate.

Another activity found on the SERCC website is the SERCC Weather Quiz, which consists of ten weather and climate-related questions that are randomly selected on a daily basis from a master list. Each question is presented with multiple answer choices for the user to select and submit for "grading." Upon submission of the answers, the user is presented with a "report card" that lists the answer submitted for each question along with the correct answer and a brief explanation. The SERCC Weather Quiz has been selected by the National Science Teachers Association (www.nsta.org) to be included in a database of websites that can be accessed by readers of selected elementary and secondary science textbooks.

SERCC Coloring Book

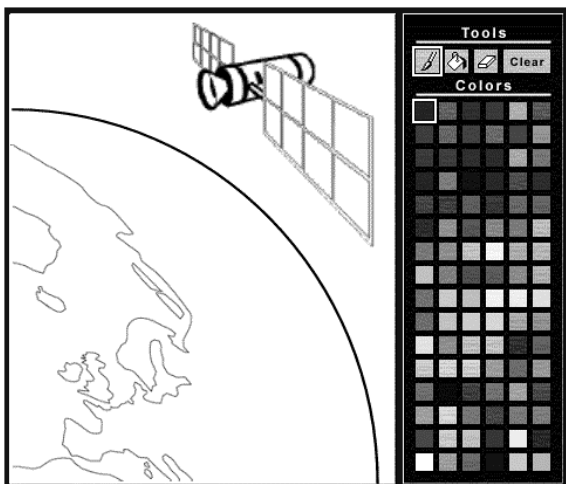


Figure 3. A page from the SERCC Coloring Book.

3.3 Resources

Resources include a variety of items that teachers and students may use either online or offline and may be integrate into their curricula or used for informal learning experiences. One of the most widely used resources available on the SERCC website is the *Southern AER*

(*Atmospheric Education Resource*). A quarterly bulletin aimed at the elementary level, the *Southern AER* contains facts, questions, and activities related to a particular topic in the atmospheric sciences. Other resources available include guides in portable document format (PDF) that teachers or students can print out and use to complete activities such as building basic weather instruments.

4. CONCLUSION

The SERCC educational outreach program contains a variety of web-based products that meet the weather and climate-related needs of the K-12 educational community and serve to both entertain and educate the user on the basics of weather and climate. These "edutainment" products can be categorized as either games, activities, or resources and provide users with an interactive means of learning about weather and climate. The SERCC will continue to support the needs of educators and students by continually adding new and exciting edutainment features to its website. The SERCC outreach program has been developed to support K-12 weather and climate edutainment across regional boundaries. We encourage all students and educators, regardless of location, to visit our website and offer constructive feedback.

5. ACKNOWLEDGEMENTS

The assistance of Dr. Alan N. Federman at NASA and Kim Alden with the Federal Emergency Management Agency web team is greatly appreciated for allowing the use of the Java applets employed by the products described here.

6. REFERENCES

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- Soukhanov, A., Ed., 1999: *Encarta World English Dictionary*. St. Martin's Press, 2208 pp.