

# Bridge to Success Open Educational Resources

GUIDE

**Student Toolkit**  
*Succeed with Math (SWiM)*



BILL & MELINDA  
GATES foundation



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## Table of Contents

<b>Introduction</b> .....	3
<b>Section 1. Navigating Succeed with Math</b> .....	3
A. The Course Location .....	3
B. Day 1 – Directions for Logging In.....	3
C. Page by Page Navigation .....	5
D. Americans with Disabilities Act (ADA) accessibility and assistance .....	5
<b>Section 2. Welcome to Succeed With Math</b> .....	6
A. Building Confidence.....	6
B. Become an Effective Learner.....	6
C. Encouraging Personal Change .....	6
D. Learning Journal of Activity .....	6
<b>Section 3. Tools and Tips</b> .....	7
<b>Section 4. Structure and Design of Succeed With Math</b> .....	10

## Introduction

*Succeed With Math* is an open educational resource that is widely available and free for your use. It is located within an online learning environment at The [Open University](#), UK, which has a long standing tradition as a leading provider of online distance and free educational learning resources. *Succeed With Math* can provide you with an opportunity to identify prior experiences with mathematics that can help assess your individual strengths and skills, set goals for your personal and professional development, enhance your preparation for vocational and career training, and hopefully, help your transition to college-level learning.

This course will assist you in:

- Building confidence in using math for home, work, or in other settings.
- Reducing fear of math and math anxiety.
- Improving basic mathematical skills and understand how to use resources (e.g. using a calculator differently).
- Developing problem solving strategies.
- Practicing general study skills to become an effective learner, especially with new math and reviewed math concepts.
- Strategizing math challenges.
- Building math skills with real-world application.

## Section 1. Navigating Succeed with Math

### A. The Course Location

*Succeed With Math* is maintained in The [Open University](#)'s [LabSpace](#) website as an open educational resource. It is one of thousands of courses taught at The [Open University](#), an institution that boasts a long history of the success and satisfaction of its millions of students. *Succeed With Math* has been updated to more closely match the needs of the typical American student. You may access this course directly from the Bridge to Success website (<http://bridge2success.aacc.edu/>) or may be directed to access the learning content through a different learning management system.

### B. Day 1 – Directions for Logging In

*Succeed with Math* Access Directions – accessed through the Bridge to Success webpage (these directions may be different if accessing the course from the institution's internal online learning management system).

1. Type <http://bridge2success.aacc.edu> in the web browser.

2. On the first page of the Bridge to Success webpage – scroll down to the blue highlighted *Succeed with Math* title. (Click on *Succeed with Math*)
3. On the first page of the Bridge to Success LabSpace – click on the *Succeed with Math* (Succeed\_with\_Math\_1.0) highlighted statement.
4. On the main page of the course, go to the upper right corner under SIGN, and click on Register.
5. Complete the requested items on the register page:
  - a. Email Address
  - b. Confirm Email Address (retype to match)
  - c. First name
  - d. Last Name
  - e. Country (scroll to United States)
  - f. Check “I agree to the Open University’s Terms and Conditions” (read terms and conditions)
  - g. Type the security words listed (if hard to read, click the circular arrows to refresh and get a new set of words until you can read and retype them in the box indicated.)
  - h. Click on Continue
  - i. You will be taken to a new page to type password information
    - i. New Password (of your choosing – you can write it down in case you forget)
    - ii. Confirm New Password
    - iii. Takes you to a new page
      1. Review Lab Space document and check where appropriate and then click on update profile.
      2. Review information on LabSpace forums – then click on Continue
6. You are then returned to the course content page.
7. Review “Welcome to *Succeed with Math!*” and then complete the “Self-Reflection Questionnaire” (By registering, the system can track your progress through the units and tells you what sections you have completed. *If you are in a formalized course or are being directed by an instructor or facilitator, please include the name of the course the instructor or facilitator provides in answering question 2 of the questionnaire.*)

**Good luck and enjoy the learning experience!**

### ***C. Page by Page Navigation***

You will find a table of contents located on the left of each webpage as you open each unit (Welcome to *Succeed with Math!*, Math and You, Getting Down to the Basic, Everyday Math, Math in Real World, Numbers Everywhere, Parts of the Whole, Using Fractions in Real Life, Relationships Among Numbers, Patterns and Formulas, Shapes and Sizes, and Communicating with Data, Charts, and Graphs). You can click on any particular section that is of interest to you or move through the course page by page.

It is recommended that you complete the “Self-Reflection Questionnaire” before reviewing Units 1 through 11 and also complete the closing questionnaire “Please Tell Us What You Thought About the Course” when you have completed using the material. (Whether you use all or parts of the content, please complete the ending questionnaire.) Be sure to also review “Welcome to *Succeed with Math!*” as you begin using the course content.

At the bottom of each section you will find a highlighted link entitled “Next” followed by the title of the next page. Clicking on this “Next” will take you to the next page of learning material. You can return to any section at any time by clicking on the section found under “Contents.”

Once you have reached the last section, you have completed that Unit and can now click on the “Succeed\_with\_Math\_v2\_1.0” link at the top of the webpage—this returns you to the main table of contents located in the center of the webpage. You can then click on the next unit or a different unit of your choosing.

You will also find a “Printable Version” link located on the left side of the webpage at the bottom of each Unit’s table of contents. This converts the webpage into a format that allows you to print if you wish to have a paper copy of the material.

You can leave and return to the learning units at any time. Your progress is tracked for you and you can refer to “My Activity Record” in Section 3 (Tools and Tips) and Section 4.C (Learning Tools) of this toolkit below.

### ***D. Americans with Disabilities Act (ADA) accessibility and assistance***

Written transcripts of all audio and video elements are available as both webpages and Adobe PDF files. These transcripts include descriptions of the visual elements, in addition to a full written transcript of the video. Several alternative formats of the study materials are also available, i.e. Word, EPUB, Plain Zip, and printable HTML.

(Access the downloadable versions of this unit by [clicking here](#)). For more information on accessibility issues please see our [website accessibility statement](#).

## Section 2. Welcome to Succeed With Math

### ***A. Building Confidence***

*Succeed with Math* is designed to help you build confidence in the math skills you have previously learned and to develop strategies to learn new skills. Having the knowledge of what you have learned previously along with what the ability to adapt to new math concepts will better prepare you in your future career or educational experience. You will be encouraged to explore new ways to look at mathematics and how it is essential in today's working environment. *Succeed with Math* will increase your personal awareness of your current knowledge, and help you to develop strategies to reduce the fear and anxiety that learning math may bring.

### ***B. Become an Effective Learner***

You will be encouraged to explore all eight units of *Succeed with Math*. Even if you find that some of the earlier units are easier for you to comprehend or you are comfortable with those math concepts, it is helpful for you to review and build the confidence in your current knowledge of all of the math problems. You will be presented a viewpoint of math that reflects how math is essential in almost any job you will face in your chosen field of work.

### ***C. Encouraging Personal Change***

You will be challenged to evaluate your confidence level in math, and to build upon what you already know. You will be asked to read and make sense of the information provided and learn how to convert math problems into real-life world applications. You will be presented with activities and a multimedia approach that encourages you, the student, to reflect and synthesize your basic understanding of the material you have reviewed. You are provided post quizzes for all eight units, and in Units 2–8 you are given an opportunity to test your knowledge in a pre-quiz activity. These results are your personal results and can guide you in selecting key areas within the content you may want to spend more time. It is recommended that you record your thoughts and to write out the solutions to the math problems presented. You may want to create a “[learning journal](#)” as you progress through the course to maintain a history of your written responses and answers to the questions provided.

### ***D. Learning Journal of Activity***

You are encouraged to maintain a record of your written work in response to the activities outlined in *Succeed With Math*. You can utilize the [Learning Journal](#) section provided within *Succeed With Math* under the Learning Tools section, create a notebook to maintain your written work, or create a computer file and type your response into Word documents. Learning journals can add value to your learning experience by:

1. Keeping personal notes and reflections on the material you are studying:
  - a. Reflection involves thinking and writing as a guide for future action.

- b. Reflection promotes critical analysis and retrieving more out of each experience.
  - c. Reflection leads to effective decision making.
  - d. Reflection leads to thinking with questions instead of judgments.
  - e. Reflection leads to the practice of writing in a framework that captures WHO, WHAT, WHERE, WHEN, and WHY.
  - f. Reflection as a form of journaling allows for interpreting the written word or viewed experience/activity, and building writing skills in documenting progress, recurring themes, and potential actions of the user.
  - g. Reflection as a form of journaling allows the user to experience growth and a focus on areas of opportunity, and serves as a motivational tool to stay on their educational path.
2. Recording answers to assignments.
  3. Raising additional questions for future consideration.
  4. Noting specific points or ideas that you may want to follow up at a later time.
  5. Making observations of material you may want to share with others.
  6. Noting items you may not clearly understand or need further help with.
  7. Noting items you want to further research.
  8. Using as a study diary or note thoughts on how to improve your studying strategies.

### Section 3. Tools and Tips

**There are a number of tools available to you as you progress through the course content:**

**Activities:**

Assignments are provided throughout the course content to encourage you to reflect on the reading and to critically analyze and respond in writing.

**Video Presentations:**

There are video segments of interviews with other students. Transcripts are available for each video clip and can be accessed by clicking the **Transcript link** located below each video box presented.

**Reveal Comment:**

You will find a small white box with “Reveal comment” included after each video section or activity assignment. If you click on this box, hints will be revealed along with other discussion points to assist you in evaluating and comparing your written work with suggestions provided by the authors of the course content.

**Case Studies:**

Some of the suggested activities include a review of a case study.

### **Figures and Diagrams:**

The course developers have also provided visual examples through diagrams and figures providing you examples of assignments, including sample mind maps and samples of work submitted by other students.

### **References:**

There are additional resources available at the end of each unit that can provide you with reference points and other articles or exercises to supplement the course content.

### **Length of Time:**

The course developers have provided estimated time frames for each activity. These are estimates to provide guidance and also to encourage you to take the time to critically analyze the material. You are encouraged to personally reflect on your answers and to consider how this can promote personal positive change for you.

### **Learning Journal:**

Create a journal of your responses to the assignments as a record and history. The course is designed to challenge you to consider plans for the future, and looking back at your work can help as you progress through the course. If you are using *Succeed With Math* as part of an organized academic course, the “[Learning Journal](#)” will be helpful in being able to track in class discussions, online written forum responses, or to provide confirmation of course content completion.

### **Additional Open Educational Resources:**

The [Open University](#) provides thousands of additional courses and information that can aid your pursuit of academic goals or other areas of self-improvement. Once you have registered, you will have access beyond the *Succeed With Math* experience in the [Open University](#)’s OpenLearn website ([www.open.edu/openlearn](http://www.open.edu/openlearn)). If you are interested in reviewing other open course material, click on the [LabSpace](#) at the top of the course page and you can begin to search for these additional resources.

### **Tracking Your Progress:**

Once you have registered using your email address and password, your individual progress is tracked in [LabSpace](#). On the right side of the course content page you will find Learning Tools, and underneath Learning Tools you can click on ‘**My Activity Record**’. You will then receive a complete history of your activity within the course, including the last day and time you accessed a section and whether you have responded or viewed a section of the course material.

### **Additional Resources:**

Additional free and open learning resources can be accessed through the Bridge to Success website at <http://bridge2success.aacc.edu/and> through the Massachusetts Institute of Technology’s [OpenCourseWare](#), Carnegie Mellon University’s Open Learning Initiative that provides access to multi-media courses, and the Creative Commons offering access to creative and scholarly works. The [Open University](#)’s [OpenLearn website](#) provides hundreds of units of course material in an open and free environment for a global audience.

**Below find additional tools and tips to assist you as you progress through the course content (note that the keys refer to a PC keyboard):**

- Some of the videos have the capability to click to open a full screen version. Use the toolbar at the bottom of each video to select the full screen mode of the video. Once completed, use the “Esc” button on your keyboard to take you back to the course material.
- When you point to a linked item or highlighted/underlined resource and there is a question mark that pops up with your mouse pointer, you can click and it provides a glossary explaining what the item is.

## Section 4. Structure and Design of Succeed With Math

### A. Course Elements

This course moves from math in the abstract to an emphasis on practical math with real-world applications. You will be introduced to a range of key ideas and numerous practical examples helping you tackle everyday math problems at home, work or in your further studies. The goal is to build your confidence in your math skills, reduce your math anxiety, and to provide a solid foundation for the pursuit of higher levels of math.

The course contains a variety of material aimed at maintaining your interest and motivation. There are case studies, activities, puzzles, and historical snapshots as well as mention of more modern developments. There are also audio and video clips, online math games, and quizzes. Two learning tools specific to this course are ‘Pencasts’ and an online calculator. Some of these items are indicated by graphics in the text:



#### **Activities**

are short questions in the text to help the students check their understanding of the previous text. They often have hints to help students, followed the solution to the questions or problems.



#### **Video clips, articles, or math games**

these are taken from various sources on the Web to bring the math topics to life. Audio clips provide background information on the topic being reviewed. Transcripts are available as an alternative to listening to the audio clips.



#### **Self-check problems and quizzes**

##### *Self-check problems*

These are presented to test the student’s understanding. The self-check problems allow the student to review the math concept and check their responses. The student can test their understanding and then click “Reveal answer” to determine if they answered correctly.

##### *Quizzes*

These quizzes will be available at the beginning and end of each of the units and the students should be encouraged to try them. The student can take the quiz as many times as they would like. At the bottom of the scoring page is a box entitled “Submit all and finish”. This box will then reveal a warning notice that states, “You are about to close this attempt. Once you close the attempt you will no longer be able to change your answers.” If the student clicks “OK” the student will no longer be able to access that quiz for future review. Once the student believes they do not need to return and test themselves utilizing a

particular quiz, they can click “Submit all and finish” and the quiz information will be recorded in their activity record.



### **Pencasts**

These are short audio graphic/audio clips – the online equivalent of ‘chalk and talk’ classroom sessions (see Figure 1). An instructor explains step by step how to solve a math problem in an animated pdf.

For further information and examples of Pencasts, please [click here](#).

Note that to access Pencasts the latest version of Adobe Reader is needed ([download here](#)).



### **Online calculator**

The course uses an online calculator ([Demo](#)).

## **Extensions and Further Exploration**

Extra material is available for students who would like to extend their understanding at the end of each unit. These are optional, but you might want to encourage your students to work through them.

### **Self-check (checklist)**

At the end of each unit, a summary of the topics and skills covered is provided.

## ***B. Course Topics and Themes***

“**Self-Reflection Questionnaire**”—please complete this questionnaire prior to starting any unit within *Succeed With Math*. If you are in a formalized course or are being directed by an instructor or facilitator, please include the name of the course the instructor or facilitator provides in answering question 2 of the questionnaire.

### **Unit 1: Math and You**

This unit builds confidence, develops problem solving strategies, and explores study skills to succeed in mathematics.

### **Unit 2: Getting Down to Basics**

This unit addresses the history of numbers, using numbers, lines, decimals, rounding, estimating, basic operations, and the order of operations, using real-world scenarios.

### **Unit 3: Everyday Math**

This unit introduces the four basic math operations and some mental math strategies.

#### **Unit 4: Math in the Real World**

This unit addresses additional problem-solving strategies, and reviews the importance of order of calculations (operations) and exponents.

#### **Unit 5: Numbers Everywhere**

This unit investigates units of measurement, signed numbers, and reading and writing mathematics.

#### **Unit 6: Parts of the Whole**

This unit focuses on writing, using and understanding fractions, and applying the four basic math operations.

#### **Unit 7: Using Fractions**

This unit reinforces strategies for what to do when you get stuck on a math problem, using a real-life problem with fractions.

#### **Unit 8: Relationships Among Numbers**

This unit provides activities to address how numbers are used in daily life, and explores the connections among fractions, percentages, and ratios.

#### **Unit 9: Exploring Patterns and Formulas**

This unit instructs students on visualizing problems using pictures and diagrams, interpreting and using notation for inequalities, and interpreting word formulas to solve problems.

#### **Unit 10: Investigating Geometric Shapes and Sizes**

Prepares students in understanding the key properties of geometry, and in interpreting and drawing scale diagrams and how shapes and sizes are measured.

#### **Unit 11: Communicating with Data, Charts, and Graphs**

This unit teaches how to calculate means, medians, and ranges for data sets; how to interpret and construct tables; and how data is collected, recorded, analyzed, interpreted, and used in our everyday life.

**Please tell us what you thought of the course** – please complete this questionnaire after completing *Succeed With Math*.

### **C. Course Section Tabs**

#### **1. My preferences**

This section is designed for your instructor/facilitator.

#### **2. Learning Tools**

The [Open University](#) has provided a number of learning tools to support your review of this course content and other educational opportunities you may pursue. The tools are useful in adding value to learning experience and enhancing your experience with other learners utilizing this course content.

#### **The options include:**

- **Using Learning Tools** provides you additional learning tools and resources to supplement *Succeed With Math*. Some examples include:
  - **Cohere QuickStart Guides** provide a web-based tool to create a knowledge mind map.
  - **Re-use, Remix and Create** lets you share these open educational resources and learn how to use this open educational resource with other educational content.
- **FlashVlog** is a tool allowing you to create a video diary online.
- **FM** is a one-click video conference tool that allows you to meet with other students anywhere in the world.
- **Forums** are a place to meet, discuss and share ideas. You can start a discussion or join an existing discussion.
- **Knowledge Mapping** is available through [Compendium](#) – a knowledge map software tool for visual thinking.
- **Learning Clubs** can be set up by anyone who wants to meet other learners to discuss a specified subject of shared interest. You can also utilize this section to join already existing learning clubs.
- **Learning Journal** suggestions are outlined in Sections 2 and 3 of the Toolkit. This provides an excellent opportunity for you to create a record of your learning experience and strategies to enhance your study skills for this course and for future courses.
- **My Activity Record** allows you to view the number of times you have viewed any section of the course content and the date that you viewed that content. It is also useful for you to identify what sections you have and have not completed.

If you have any questions concerning accessibility or navigating *Learning to Learn* please send an email request to: [bridge2success@aacc.edu](mailto:bridge2success@aacc.edu). (Please allow 24 hours to receive a response.)