

if $y = a \pm b$
 then $\Delta y = \Delta a + \Delta b$
 if $y = \frac{ab}{c}$
 then $\frac{\Delta y}{y} = \frac{\Delta a}{a} + \frac{\Delta b}{b} + \frac{\Delta c}{c}$

$E = hf$
 $hf = \phi - E_{\text{kin}}$
 $hf = hf_0 + eV_s$

$R^3 = \text{constant}$
 $F = G \frac{M_1 M_2}{r^2}$

heating e

CREATE A SPACE THAT
 OPENS DOORS
 TO THE FUTURE.

$\text{resist} = 10 \log \frac{1}{I_0}$ where $I_0 = 10^{-12} \text{ W m}^{-2}$
 $I_0 e^{-\mu x}$
 $\frac{\ln 2}{\mu}$

Ac supply

ammeter

galvanometer

power = $\frac{V^2}{r}$
 $q = \frac{V}{r}$



SMITH SYSTEM™

CONSIDERING A STEM ENVIRONMENT?

NO NEED TO EXPERIMENT WITH FURNISHINGS.

It's only logical to create STEM (Science, Technology, Engineering and Mathematics) learning environments with the support of the latest advancements in the field of education. Experts in this area report STEM environments perform best when they foster collaboration among students. To achieve this, they should convey a sense of openness and creativity.

Where to begin? Start thinking in terms of three rooms. Room One, the Classroom: Here, students focus primarily on Math and Engineering subjects. Room Two, the Lab: Here, students focus primarily on Science and Technology – from robotics to chemistry. Room Three, the Commons: Here, students freely collaborate and learn from each other.

Smith System furniture is uniquely suited to make your STEM environment as effective as it can be.

Our Interchange™ Wing Desks, pictured in these pages, allow students to work individually or in groups. Similarly, our Flavors™ Seating and Plato™ Seating provide versatility in seating choices that extend beyond aesthetics. The need for power and connectivity for student devices is met through innovative products like our I-O Post, Powered Cafe Tables and Multimedia Tables. Cascade™ Storage Cabinets allow teachers to manage classroom materials and projects of all kinds.

Inspiring and educating our next generation of doctors, scientists and innovators is no small task – but effective learning environments that meet their needs can only help fuel their curiosity and enhance their sense of discovery. We realize every school is different, and there's no one-size-fits-all solution. That's why we'd love to talk about how we can help you create the most effective learning environment for your students.

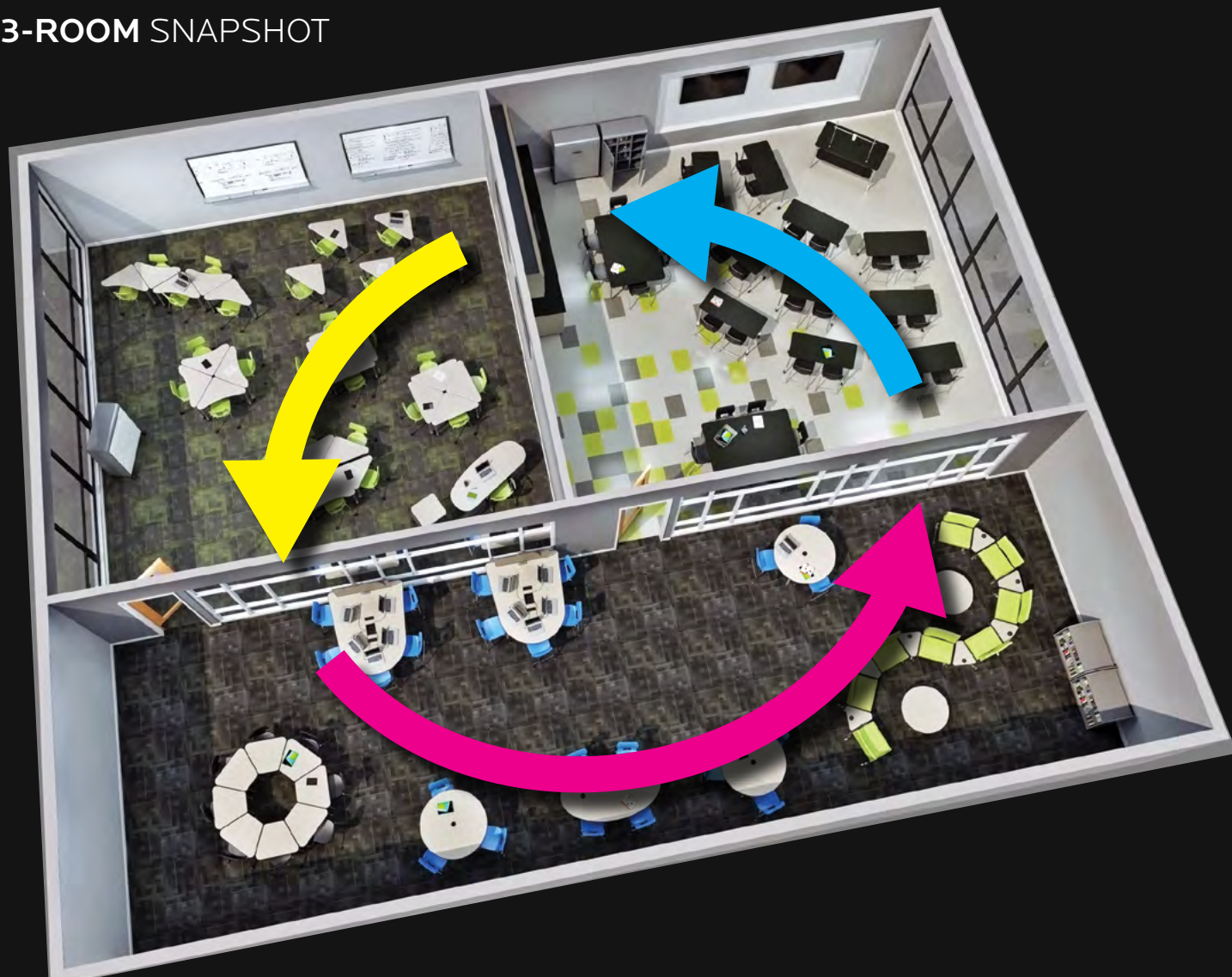
CONTACT SMITH SYSTEM:

800 328 1061

Smith System's innovative school furniture is sold through a national dealer network. Please contact Smith System for a dealer recommendation in your area. Call: 800 328 1061 Email: furniture@smithsystem.com



3-ROOM SNAPSHOT



CLASSROOM

Students receive instruction in an area integrated with the lab and commons.

COMMONS

Students collaborate in this relaxed environment – sharing, discussing and questioning.

LAB

Designed to allow students to see demonstrations, work alone or in groups.

thinking beyond the classroom door.



THE CLASSROOM

Imparting instruction.
Encouraging interaction.

Furnishings make this collaborative classroom a dynamic environment. They include: Smith System Interchange™ Wing™ Desks with optional casters for mobility. Mobile Flavors™ Seating enables movement and interaction. The Cascade™ Cabinet with Lectern facilitates presentations and holds materials. Its functionality integrates with the Cascade™ Bullet Teacher Desk.



THE COMMONS

Challenging students to think big.

This environment invites interaction. Accordingly, the Chat™ Chairs (arranged in the upper right) suggest informality and openness. The Multimedia tables (set at 34"H with 24"H Plato Stools) allow groups to present from their devices onto the display. Huddle Desks allow students to work individually or in groups of two, four, or up to eight. Multiple Powered Cafe Tables (set at 42"H with 28"H Plato Stools) create casual collaboration areas. For large group gatherings, plan for Flexspace in the commons.



THE LAB

Inquiry, experimentation
observation and discovery.

In the lab, Smith System Planner™ Science Tables provide stable, highly durable work surfaces for experiments of all kinds. They, like Science Tables in our UXL™ and Interchange™ lines, are steel reinforced and offer Trespa™ TopLab™ Plus work surfaces. Plato™ Seating provides excellent lumbar support and a moderate degree of movement for the student.

WHAT ARE THE KEY ENVIRONMENTAL ELEMENTS?

Make sure the furnishings in the room contribute to student engagement with the subject. One fundamental way of doing this is assuring the furniture and classroom layout are compatible with the method of STEM teaching your school has adopted. If your school has adopted collaborative learning or other active inquiry-based method, be sure you have the appropriate desks and chairs – ones that lend themselves to working in small groups.

Chairs, desks and all other furnishings in a successful STEM environment must be:

ADAPTABLE

FLEXIBLE

MOBILE

ERGONOMIC



DESKS & TABLES

In project-based learning, students work in groups. Student desks or tables must be capable of being arranged into compact pods to accommodate six to eight students. Here, flexibility and the ability to rearrange the desks for uses in multiple ways is key. So look for desktops that taper from back to front, approximating a piece of pie. When gathered, this shape allows a tight circle to be formed, which encourages participation on the parts of all students in the group. The desks can also be arranged in smaller groups or totally separated for individual work or testing.



Our Multimedia Tables handle six students and its shape allows all six unobstructed visual access to a monitor. The table can be used at 34" high and the students can sit on stools (or stand) or it can be at standard sit-down height. Other Smith System Tables can be combined in creative ways for a STEM environment. For example, you can start with a 60" Half-Round Table and add 30" x 60" (or 30" x 72") Rectangle Tables, which adds flexibility and reconfigurability to the STEM classroom.



SEATING

Can seating really make a difference in a collaborative learning environment? We believe so. Students in an environment like this need to be able to interact with students all around them and any chair that doesn't help them do this becomes a hindrance on the learning process. To facilitate learning in STEM classrooms, Smith System seating lines offer a range of movement and a range of seating positions.

STORAGE & PRESENTATION

Project-based classrooms need a means for organizing project materials. That is the reason Smith System Cascade Storage exists. Educators can organize, store, manage and distribute project materials, or 3D manipulatives from the Cascade Unit to the student's desk or to the teacher's desk. The individual units are available in nine sizes and offer an incredible degree of customization, so the school can tailor the capacity and functionality to their own needs. A few options include, casters to provide easy mobility, locking doors and power to house projectors and computers, and optional lecterns to help teachers make more effective presentations.



CONNECTIVITY

Because STEM classes make great use of technology, students need the ability to connect with data and other resources. Optimized STEM classrooms allow students to have power for their computers or tablet devices as well as WiFi. To this end, the Smith System I~O Post™ has been very well received, and now several options are available to allow you to tailor the connectivity to your classrooms' needs. In surface power options are available for almost all tables.



SCIENCE TABLES

If your science classroom or lab will be using chemicals and heat, be certain that the work surfaces can stand up by choosing a Smith System Science Table with a TRESPA TopLab Plus work surface. Moreover, Smith System Science Tables provide the large work surfaces, strength and stability needed to support heavy materials. They can be fitted with optional casters for the greatest flexibility. Another option is to create some height in the lab with stand-up height tables at 34" high, available in the Planner™ and Interchange™ lines. These pair perfectly with 24" Fixed-Height Stools in either the Plato or Flavors lines.



ART TABLES

For STEAM programs, Smith System offers tables expressly made to stand up to the needs of an art studio. Their large work surfaces offer added durability and their frames, extra strength to provide stability and add support for projects using heavy media like clay, here, casters are key for adding mobility and flexibility. Consider highly mobile, oversize tops such as 42x90 Planner, Interchange or UXL tables.