The Exploration Studio

A Vision for the High School Classroom of the Future







In 2010 Slate Magazine ran an open competition to Reimagine the American Classroom. The 5th Grade Exploration Studio by NAC Architecture was selected from 350 entries as the winner of that competition. Jurors said: "Their Classroom embodies the word connection. Students are connected to the earth, to the Internet, to one another, to their teacher." Now, for CEFPI's call for designs of Innovative Classrooms of Today, the team of VS America, Inc., NAC Architecture, Mondo, Tandus, SMART Technologies, Formica and Sheldon Labs have adapted the design to serve high school students and offer it for construction at CEFPI's International Conference in San Antonio, Texas.

The Exploration Studio acknowledges that children learn in different ways and at different paces so their place of learning must be personalized, yet flexible enough that they can explore many different roads to learning. They must be able to gain foundational knowledge but must also learn to work alone, work in groups, cooperate with others, and use modern tools to acquire knowledge. They need the ability to connect to the world and to the environment to become responsible citizens.

The Exploration Studio allows a variety of learning to take place and is flexible enough to be physically transformed on a regular basis by students and teachers. Each student has a home base organized into 6-7 student learning teams. The teams are separated with a low partition allowing the teacher to see all stations at all times. Each student has a computer with internet access and each team shares a common area that allows them to work alone, work together on projects, and view web and video content from their stations. The ends of the central stations have a round collaboration table with a large flat screen monitor to allow even more flexibility in how teams collaborate.

The entire class shares a central project area in their studio that is equipped with a variety of seating and work surface choices. This area contains a wet area with 2 sinks for projects,







discussions or private reading. A large "smart board" computer screen between the sinks along the window wall can be used for student presentations, lectures by the teacher, or to connect to other classes in other parts of the world via Skype or similar programs.

Arranged around the perimeter of the room, the student stations and computer screens can be seen by the teacher at a glance from the center of the room. Mirrors placed behind the computer screens and tilted up slightly allow teacher and student to make eye contact without the need for the student to turn around.

Ideally, the room is long and shallow in the shape of a trapezoid. This shape helps acoustics by reducing reflected sounds and creates a base location for the teacher. The narrow classroom allows natural light from the windows to penetrate deep into the room. The studio is connected to other studios not with a corridor, but with a shared project/large group area equipped with a variety of seating, tables, kitchenettes, and with light wells to allow plenty of daylight into the space. The Studio is separated from this project are with a glass wall that folds out of the way to create an even larger space.

The Exploration Studio does not stop at the exterior walls, but extends to the out of doors where a covered plaza equipped with freeze proof sink and work bench allows outdoor experimentation. On one side a door and windows connects students to the exterior, while on the other side a roll-up glass garage door can be opened on nice days allowing class activities to spill out to the exterior. A story telling circle and a garden for growing food nudge into a natural landscape which includes native vegetation and a water course so students can study their environment.

The Exploration Studio is dedicated to personalized learning and encourages students to develop multiple skills, while working on projects that interest them.

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The Team:



VS America, Inc.

VS is a German manufacturer of high quality furniture for both educational and commercial environments. With a company history of more than 110 years, VS has become a well-recognized furniture manufacturer in Europe and especially in the past 10 years also in North America. VS believes in designing contemporary furniture that stands the test of time. Quality, ergonomics and sustainability are the key factors leading VS's product development. VS America, Inc. is the US subsidiary of VS (Vereinigte Spezialmoebelfabriken GmbH & Co. KG) catering to the North, Central and South American marketplace. The company's business focus here is on K-12 and higher education.



Sheldon Labratory Systems

Sheldon designs and manufactures quality lab tables, casework, and furnishings for school science laboratories. Since 1898, Sheldon Laboratory Systems has built a reputation for designing and manufacturing the most innovative and durable lab furnishings available for elementary, middle school, high school and college laboratories. We offer extensive lab planning services to help you maximize available space and provide safe, effective and attractive learning environments. And we work closely with teachers, school administrators, architects and contractors to provide the best lab furnishings possible for any budget.

NAC Architecture

Company Overview:

NAC Architecture has offices in Denver, Los Angeles, Seattle and Spokane and serves clients throughout the west. Focused on designs for education, NAC Architecture creates educational environments ranging from early learning centers to university research facilities. Dedicated to development of best practices and the use of current research to inform our efforts, NAC Architecture is a leader in progressive school planning and design. Committed to creating buildings that use our resources wisely, NAC Architecture designs buildings to be energy efficient, sustainable teaching tools that are delightful locations for learning.

Recent national awards from Learning by Design, the AIA's Committee on Architecture for Education, and CEFPI, testifies to NAC Architecture's commitment to continuously improve environments for students and teachers. Having planned and designed numerous school and university buildings at all instructional levels, NAC Architecture combines innovative thinking with long experience to create facilities that perform on multiple levels. Our designs are not only functional, but are also sustainable, economical, and responsive to the values of our clients and their communities.



Formica Corp

As a global design leader and laminate manufacturer, Formica has become a known household product name. 2013 will mark Formica's 100 year anniversary. With a product range for both vertical and horizontal use, Formica offers not only Laminate, but also Solid Surfacing, Decometal, and other Specialty products. Laminate still serves as the economical choice for surfacing an area, thus leading the educational market to find great value in the use of Laminate products.



SMART Technologies

SMART is the world's leading provider of interactive whiteboards.* The company introduced the world's first interactive whiteboard in 1991 and remains the global product category leader, providing easy-to-use, integrated products and services that improve the way the world works and learns. For more than 20 years, innovation and commitment to excellence have been at the core of our business. We help educators achieve better results with technology products that support student-centered learning. We help businesses become more productive with easy-to-use collaboration solutions that enable better results. Our success is driven by a deep commitment to and engagement with both the education and business communities.

Mondo

Mondo is the global leader in the sports and contract flooring markets, manufacturing flooring surfaces for virtually every application. More than 1,100 Mondo tracks and 800 Mondo artificial turf fields are installed worldwide. The official supplier of the athletic track for the past nine Olympic Games and the upcoming 2012 London Olympics, Mondo also is the official supplier or official sponsor of more than 100 sports federations and associations. The company supplies a wide variety of commercial flooring, and it is the world's largest producer of sports and toy balls with an average daily production of 450,000 units. In addition, it manufactures large luxury yachts under its Mondo Marine division.

A family-owned business since its founding in 1948, Mondo sells its products in more than 196 countries. The company's global headquarters are in Italy, and it has manufacturing facilities in North America, Europe and Asia. More information about Mondo is available at mondoworldwide.com.



Tandus Flooring

Tandus creates floorcovering solutions that enhance spaces for learning, working, healing, and living through inspired design, leading-edge technology, unprecedented achievement toward sustainability, and an absolute commitment to continued leadership. Drawing upon each product category and its strengths- Powerbond[®], Modular Tile, Broadloom and Woven- Tandus offers its customers single-source innovative product design and technology, comprehensive services, and environmental leadership. With coordinated styles, extensive color ranges, and a variety of patterns and textures, Tandus has a diverse product offering, that addresses a number of budget alternatives.

Tandus has created inunison[™], a synergistic product system balancing design, technology, and sustainability, that unites the design expertise of each brand, offering customers infinite possibilities for carpet customization. With products that work across brands and construction, Tandus offers innovative product design and technology, comprehensive services, and environmental leadership.

Tandus is an American-owned company headquartered in Dalton, Georgia. The special requirements of our multinational customers are served through strategically located manufacturing, distribution and sales support operations and our exceptional local service worldwide.

PantoSwing-Lupo

Five star swivel chair.

Model #31506

Thanks to its double-walled polypropylene shell and a durable cantilever steel frame, the PantoSwing chair caters to the human body's natural need for movement and active sitting—a prerequisite for superior ergonomics. This lightweight chair comes in a variety of colors and 6 different heights; a comfort version with larger XL shell is available on select heights. The PantoSwing Lupo is available with 2-Component glides suitable for all surfaces, felt glides, or plastic glides specifically for carpet.

Features & Benefits

- Gentle rocking effect thanks to flexible tubular steel cantilever frame
- Ergonomic PP seat shell design for flexible sitting positions
- Air cushion effect due to blow molded perforated PP shell
- Grip hole for easy handling
- Plastic, felt, or 2 Component glides

Sizing Information

- Seat width=
- S=12"
- M=15"
- L= 17"
- XL= 18"
- Heights=
- No. 2 Violet Dot= 12" / Seat shell= S
- No. 3 Yellow Dot= 14" / Seat shell= S
- No. 4 Red Dot= 15" / Seat shell= M
- No. 5 Green Dot= 17" / Seat shell= M, optional with L
 No. 6 Blue Dot= 18" / Seat shell= L, optional with XL
- No. 6 Blue Dot= 18" / Seat shell= L, optional w
 No. 7 Brown Dot= 20" / Seat shell= XL
- No. / Brown Dot= 20" / Seat shell= XL

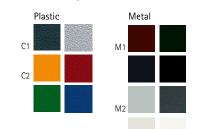
Options

- Plastic, felt, 2C glides, or castors suitable for hard surface flooring or carpet
- Optional L shell available on Green Dot height and optional XL shell available on Blue Dot height

Materials

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- Seat shell= C1, 2
- Metal= M1, 2





Additional Details For more information on materials, sizing, and pricing please contact our office:

Info@vs-charlotte.com

PantoMove-Lupo

Five star swivel chair.

Model #31506

V/S

The PantoMove-LuPo chair is one of the most ergonomic, height-adjustable, swivel chairs on the market. Designed by Verner Panton, the chair was engineered to flex with the natural movements of the body. The double-walled, perforated polypropylene (PP) seat offers a pleasant air cushion effect and supports the back. The most outstanding feature is the optional 3-D rocking mechanism, allowing for movement backward, forward, and to the sides. The PantoMove chair is available with castors or glides.

Features & Benefits

- Gas-spring height-adjustment from 17" to 20-1/2"
- Ergonomic PP seat shell designed for flexible sitting positions
- Grip hole for easy handling
- Plastic, felt, 2 component glides, or soft or hard castors
- 3-D movement of pelvis and trunk encourages increased oxygen intake and enhances blood flow to the brain, which boosts concentration during long sitting periods

Sizing Information

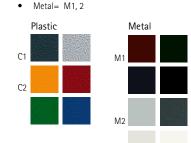
- Seat shell= Size L (Width= 17")
- 5-Starbase= Size L (Diameter= 24")

Options

- Ergonomic 3-D rocking mechanism allowing for movement backward, forward and to both sides
- Ergonomic 2-D allowing for movement backward and forward only
- Available with or without a foot ring
- Plastic, felt, 2 component glides, or castors suitable for hard surface flooring or carpet

Materials

• Seat shell= C1, 2



Additional Details

For more information on materials, sizing, and pricing please contact our office: ${\sf Info}@{\sf vs-charlotte.com}$





PMoveUp-LuPo-Schul_TY_EN - 10.18.2010

PRODUCT INFORMATION PantoMove-Lupo Plus Five-star foor chair.

Frame consisting of an aluminium star foot and a gas spring with plastic cover and an adjustable foot ring with black anti-slip coating. All models can be height-adjusted and swivelled.

Frame sizes for higher sitting and standing workplaces.

Seat shell of double-walled structured polypropylene for comfortable sitting with air-cushion effect. Concealed seat attachment and grip hole.

Features and options. Glides for hard and soft floors or universal glides (2C). With foot ring. Optionally with ergonomic 3D-rocking mechanism (soft-with side tilting option), or 2D rocking (hard-without side tilting option).

Following materials are available: Frame = M1,2; Seat/Backrest = C1,2.

Hokki Stool Stool.

Model #03825



The HOKKI is an ergonomic stool that transforms stationary sitting into an activity, ideal for brainstorming sessions and other active sitting environments. The convex base allows for movement in all directions, which is critical to student development as physical movement both increases well-being and encourages the physical and intellectual maturing process. The polypropylene body is highly stable and durable, but at the same time extremely light. The soft base padding prevents slipping. The foam sitting surface ensures increased safety for children while seated.

Features & Benefits

- Made from recyclable polypropylene which is very durable, extremely scratch resistant, and easy to clean.
- Stackable for easy storage
- Lightweight and easy to carry due to the ergonomic, wave-shaped seat edge for gripping, which also prevents the stool from rolling away
- Offers free range of mobility under controlled conditions without mechanized parts or unstable exercise balls
- Soft base padding to prevent slipping
- Suitable for all ages
- Suitable for classrooms, breakout spaces, play rooms, study rooms, office environments, and a variety of other applications.

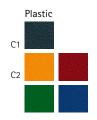
Sizing Information

- Available Heights:
 - 12-1/4" (Violet Dot Height).
 - 15" (Red Dot Height).
 - 18-1/8" (Blue Dot Height).
 - 20-18" (Brown Dot Height). NEW!

Materials

Products

• Stool= C1 (black grey only) and C2



Additional Details For more information on materials, sizing, and pricing please contact our office: Info@vs-charlotte.com



LuPoStool_TY_EN - 03.03.2009 - www.vs-furniture.com

LuPoStool Skid-stool.

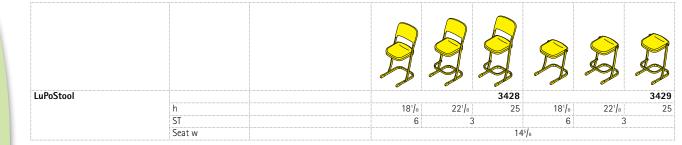
Frame of welded U-shaped skid and seat support of chrome-plated oval steel tube. Pickapack fitting for storage on table top. Smallest model without, middle and larger models with foot-rest.

Frame sizes in 3 fixed heights.

Seat of double-walled textured polypropylene for comfortable sitting with air-cushion effect.

Features and options. Glides for hard and soft floors or universal glides (2C). For maximum number stackable (ST) see table.

Accessories. Stacking wagon Model 3414 for 2 stacks and stacking trolley Model 3415 for 1 stack of chairs sizes 5 / 6. Following materials and colors are available: Frame: M1, 2 and 7. Seat: C1. Glides: black.



duct





FlipTable-RU_TY_EN - 12.01.2009 - www.vs-furniture.com

Flip Table-RU Table with folding top.

Construction comprising a centrally positioned tubular-steel crosspiece with an articulated bracket. Folding action can be effected with a two-hand safety actuator under the table top on the user side. With a fitting for securing the table top in the horizontal and vertical positions and optionally with a table connector.

Table top of LIGNOpal-coated (melamine resin) chipboard with plastic, wood or PU edge. The corners are edged or rounded. **Electrification.** Optionally by means of a fold-down textile trough on both sides.

Cable outlet. Optionally with an electronics box for system and data connections.

Frame consisting of two bent powder-coated or chrome-plated steel tubes. Frame with lockable castors.

Function. When the table top is folded up, any desired number of tables can be pushed together to optimize space. **Note.** PU edges are extremely hard-wearing, but may show signs of discoloration over time. Table connectors optionally available.

The following materials and colours are available: Frame: M2. Table top: L1, 2 and 9 (linoleum) and veneer. Edge: natural beech, as veneer or in plastic L1 and 2. Table top with PU edge in beech laminate or grey white. Further models illustrated on this page: Compass-LuPo.

FlipTable-RU	PU edge	$d = 25^{5}/8$ (folded 26 ³ /8)	21028		21029				
		h (h 28³/₃ folded)	28 ³ / ₈ (41 ³ / ₄)		28 ³ /8 (41 ³ /4)				
		$d = 27^{5}/_{8}$ (folded 26 ³ / ₈)		21030		21031	21032	21033	21034
		h (h 28³/₃ folded)		28 ³ / ₈ (42 ¹ / ₂)		28 ³ / ₈ (42 ¹ / ₂)			
		$d = 31^{1}/_{2}$ (folded 26 ³ / ₈)		21035		21036	21037	21038	21039
		h (h 28³/₃ folded)		28 ³ / ₈ (44 ¹ / ₂)		28 ³ / ₈ (44 ¹ / ₂)			
		W	51 ¹ /4	55 ¹ /8	59 ¹ /8	63	70 ⁷ /8	78³/4	86 ⁵ /a
	Increase per table in width		1 ⁵ /8						
	Increase per table in depth		5 ⁷ /8						





MyCaddy-Steh_TY_EN - 27.11.2009 - www.vs-furniture.com

duct

PRODUCT INFORMATION MyCaddy Stand-at module.

Body consisting of a tubular-steel skeleton with 4 steel posts and a solid-sheet base, as well as melamine-resin-coated LIGNOpal sides and a powder-coated, acoustically effective microperforated-sheet back panel. With design or technical castors or optionally with adjustable feet.

Front consisting of vertically sliding plastic roller shutter with metal bow handle.

Cover top made of melamine-resin-, veneer- or linoleum-coated LIGNOpal chipboard with glued-on plastic or beech edge and with either edged or rounded corners.

Organisation (depending on model) with open shelf compartment and adjustable shelf inserts of LIGNOpal, with material drawer, suspension frame and telescopic pull-out section.

Roller shutter optionally with cylinder lock.

Equipment and options. Push or design handle, lockable mailbox with slit and nameplate. Following materials are available: Frame = M1,2,7; Roller cover = C4; Carcass LIGNOpal = L1,4,6; Carcass Steel = M*; LIGNOpal cover top = L1, 4, 6, 10, F1.





S2000-F_TY_EN - 27.11.2009 - www.vs-furniture.com

roducts

PRODUCT INFORMATION Serie 2000 Typ F. Functional partition.

System consists of basic, add-on and hanging elements.

Construction is based on a four-sided frame of aluminium profile and a filling element. The sides have a vertical optical and functional groove as well as an integrated but removable U-shaped plastic strip for linking two privacy screens without using tools. An adapter can be used for 90° and 180° joints.

Filling element 1. Melamine-resin laminated LIGNOpal chipboard. **2.** LIGNOpal chipboard laminated with a vitreous-enamelled metal sheet to which magnets adhere. **3.** A soft flaxboard covererd with fabric. **4.** A melamine-resin laminated sound-absorbing panel with slits. **5.** A translucent double-ribbed board.

Supporting element consisting of combined, short and long stabilisers and adjustable feet.

Please note: When hanging accessories into the functional groove, the maximum loading must be observed (see table). **Following materials are available:** Frame = Alu (anodised); Runner/Foot = M11; Writing surface = E3; Pin surface = S15; Acoustic surface = L7; Visible surface = L1,4,6,C5.

Other models illustrated on this page: Serie 901, PantoStack-SH





Products

S2000-D_TY_EN - 01.12.2010 - www.vs-furniture.com

Serie 2000 Typ D. Privacy screen.

System consists of a single element.

Construction is based on a four-sided frame of aluminium profile and a filling element. The sides have a vertical optical and functional groove as well as an integrated but removable U-shaped plastic strip for linking two privacy screens without using tools.

Filling element 1. Melamine-resin laminated LIGNOpal chipboard. **2.** LIGNOpal chipboard laminated with a vitreous-enamelled metal sheet to which magnets adhere. **3.** A soft flaxboard covererd with fabric. **4.** A melamine-resin laminated sound-absorbing panel with slits. **5.** A translucent double-ribbed board.

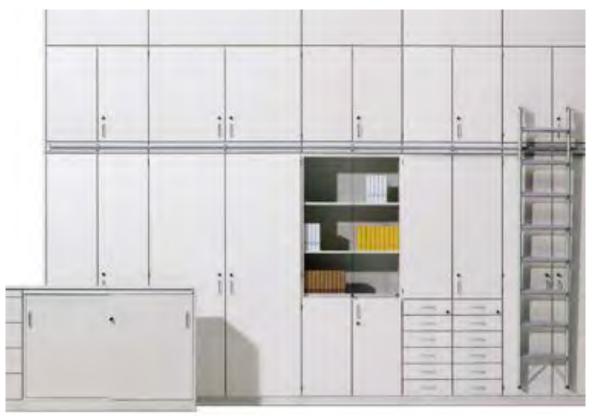
Supporting element consists of two small T-shaped feet.

Please note: Accessories cannot be hung into the functional groove of the privacy screen.

Following materials are available: Frame = Alu (anodised); Runner/Foot = M11; Writing surface = E3; Pin surface = S15; Acoustic surface = L7; Visible surface = L1,4,6,C5.

Other models illustrated on this page: NetWork.





S8_SY_EN - 27.11.2009 - www.vs-furniture.com

SYSTEM INFORMATION

Serie 80000 Cupboard programme based on the DIN 18000 Euro design grid.

Construction: The body is either glued together or capable of being knocked-down and can be combined with other cupboards to form walls.

Body is of melamine-resin laminated LIGNOpal chipboard with glued-on (KU) plastic or (BU) beech edges. Some bodies have glued structural shelves and partitions (in the middle or displaced) to divide the body vertically and horizontally. Rows of holes or a perforated aluminium section (25 mm spacing) for adjustable shelves. Body with concealed adjustable feet and optionally with a plinth of solid beech or steel and with removable back panel.

Fronts are either open (shelves) or fitted with wing, sliding or glass doors as well as tambours or drawers. **Cylinder locks** either keyed alike.

Bow handles of steel, wood or plastic as well as flush handles of plastic and knobs of steel.

Features: Optional panels, top covers, end and/or plinth panels as well as wall and ceiling closers.

Internal fittings: Adjustable shelves or wardrobes. Suspension files, drawers, "English drawers" and many others storage and filing accessories for special cupboards.

Following materials are available: Front LIGNOpal = L1,4,6,F1; Carcass/bases LIGNOpal = L1,4,6; Cover plate LIGNOpal = L1,4,6.







Spaces_TY_EN - 10.04.2008 - www.vs-furniture.com

PRODUCT INFORMATION

Spaces Discretion element.

Function: Spaces discretion elements can be used to partition off work areas on table systems. **Construction:** Consisting of a curved sheet-steel frame in the colour arctic with a fabric-covered acoustically effective inner section.

Field of application: Spaces can be used on tables of the Serie 901, NetWork and Axis 360° product families with 25 mm thick table tops.

The following materials and colours are available to choose from: Fabrics: S16-17.





PMove-Soft_TY_EN - 27.10.2011 - www.vs-furniture.com

PRODUCT INFORMATION PantoMove-Soft Foot star chair.

Frame comprising an aluminium foot star and a gas-filled spring with plastic cover. Seat shell comprising a blow-moulded plastic core with all-over padding and a tautly knitted 3D fabric cover.

Equipment and options: Glide elements or castors for hard or soft floors or 2C universal glide elements. Optionally with a particularly ergonomic tilt mechanism, i.e. with soft or damped lateral tilting.

Plus model for higher sitting/standing workstations with a black circular footrest with anti-slip coating and load-braked castors. Note: Soft models cannot be positioned on chair suspensions.

Following materials are available: Frame = M1,2,7,polished; Upholstery = S42.





Ne_SY_EN - 27.11.2009 - www.vs-furniture.com

duct

NetWork Workplace system.

System consists of basic and add-on tables as well as hanging leaves. Frame of screwed round steel tubular legs with four-sided half-oval tubular steel top frame, both powder-coated or chrome-plated.

Functional gap between table top and supporting frame accepts accessories and adapters for the linking of further tables and tops. Set-back table legs in corner areas create more legroom.

Add-on elements can be positioned in the functional gap (screen, shelf, lamp holder, etc.) or in the aluminium cable outlet (telephone holder, lamp holder, etc.) or between the table legs (CPU-holder, printer shelf).

Electrification is available through a grid cable basket which is hinged on both sides or clip-on plastic modules. The cable outlets are holes with plastic or aluminium inserts.

Table heights are fixed (72 cm) or adjustable in either steps or continuously with a winding handle from 68 to 85 cm. Table legs fitted with levelling screws or castors.

Table top is a melamine-resin laminated, veneered or linoleum covered LIGNOpal chipboard with glued-on plastic or beech edges or solid beech profile. Choice of square or round corners.

Table tops are available in rectangular, wedge, circular and angular shapes amongst others.

Following materials are available: Frame = M1,2,7; Top LIGNOpal plastic/beech = L1,4,6,10,F1.

Further models illustrated on this page: Serie 700, OfficeBox, Serie 2000, Leanos-Turn.