

0F.LQQH\ , QGHS HQGHQW 6FKRRC
)LQFK (OHPHQW DU\
, PSURYHPHQW 3ODQ



%RDUG \$SSURYWREEDWH
3XEOLF 3UHVHQWDERQ 'DWH

0 L V V L R Q 6 W D W H P H Q W

9 L V L R Q

&RPSUHKHQVLYH 1HHGV \$VVHV

3HUFHSWLRQV 6XPPDU\

,W LV RXU PLVVLRQ DQG YLVLRQ WR SUHSDUH RXU VWXGHQWV WR EH FULWLFDO WKLQNHUV DQG

3ULRULW\ 3UREOHP 6WDWHPF

)LQFK (OHPHQWDU\
*HQHUDWHG E\ 3ODQ /HQUQLQJ FRP

RI

&DPSXV
2FWREHU

* R D O V

+LJK 3ULRULW\

(YDOXDWLRQ 'DWDQSDUHG5HVSRQVH 3URWRFRO SRVWHG LQ DOO URRPV DQG XVHG GXULQJ D(GLVWULFW SROLF\

)LUH

/RFNGRZQ

+ROG IRU 0HGLFDO (PHUJHQF\

+DJDUGRXV 0DWHULDOV

6HYHUH :HDWKHU

6KHOWHU

5HYHUVH (YDFXDWLRQ

+ROG

6HFXUH

(23 DIWHU DFWLRQ GULOO UHSRUWV 6DIHW\ \$XGLW ([WHUQDO \$XGLW 5HSRUWV

6WUDWHJ\ 'HWDLOV

5HYLHZV

6WUDWHJ\ V ([SHFWH)G5HKVZDOW,BSDFXWHQW SDUWFLSDWLRQ LQ 0,6' /LYHV .LQG LQWHUQDO VLWH DQG GLVWULFW 3'	LRQDO /HDGHEUV DQG	RY (HE	XQH?
6WUDWHJ\ V ([SHFWH)G5HKVZDOW,BSDFXWHQW SDUWFLSDWLRQ LQ 0,6' /LYHV .LQG LQWHUQDO VLWH DQG GLVWULFW 3'			
6WDII 5HVSQRVLEOH&DRISXVRSQWROLDQG &RXQVHORU			



1R 3URJUHVV \$FFRPSOLVKH &RQWLQXH ORGLI\



(YDOXDWLRQ 'D&WIDQFLXSUDFHVHHGEDFN DGPLQLVWUDWLYH FDOHQGDU LPSOHPHQWDWLRQ RI FD





6WUDWHJ\ 'HWDLOV	5HYLHZV		
6WUDW)HLQFK ZLOO SURYLGH SURIHVVLRQDO OHDUQLQJ RSSRUWXQLWLHV WKH FDPSXV 6WUDWHJ\ V ([SHFWHG 5FKXOW ZPSOFW DEOH WR DQDO\]H DQG XWLOL 6WDII 5HVSQRVLEOH&DRISXVQGWROLDQG LQVWUXFWLRQDO FRDFKHV	RFXV)RGFDQWLYH6X\$PDDV 1RY HGDWDWRVXSSRUW)HE -XQH	H6X\$PDDV -XQH
6WUDWHJ\ 'HWDLOV	5HYLHZV		
6WUDW)HLQFK ZLOO LPSOHPHQW D 3/& PRGHO WR FROODERUDWH RQ WKH J 6WUDWHJ\ V ([SHFWHG 5FKXOW ZPSOFW DEOH WR DQDO\]H DQG XWLOL 6WDII 5HVSQRVLEOH&DRISXVQGWROLDQVWUXFWLRQDO &RDFKHV DQG WHDFKHUV	RDOV)DQGDWVXWIFRPPD HGRWDWRVXSSRUW WHDFKHUV)HE -XQH	H6X\$PDDV -XQH
6WUDWHJ\ 'HWDLOV	5HYLHZV		
6WUDW)HLQFK ZLOO LPSOHPHQW WKH 0,6' DVVHVVPHQW SODQ IRU . 6WUDWHJ\ V ([SHFWHG 5FKXOW ZPSOFW DEOH WR DQDO\]H DQG XWLOL QHHGV 6WDII 5HVSQRVLEOH&DRISXVQGWROLDQVWUXFWLRQDO &RDFKHV 7HDFKHUV)RUPDWLYH6XPPDV WLRQYRIDFWERQDEXH)HE	H6X\$PDDV -XQH
6WUDWHJ\ 'HWDLOV	5HYLHZV		
6WUDW)HLQFK ZLOO UHFRJQL]H DFDGHPLF VXFFHVV DFURVV WKH FDPSXV 6WUDWHJ\ V ([SHFWHG 5FKXOW ZPSOFW DEOH WR DQDO\]H DQG XWLOL 6WDII 5HVSQRVLEOH&DRISXVQGWROLDQVWUXFWLRQDO &RDFKHV WHDFKHUV DQG FRPPXQLW\ ZLOO EH			

6WUDWHJ\ 'HWDLOV	5HYLHZV		
6WUDW)HLOAFK ZLOO XVH VXPPDWLYH DQG IRUPDWLYH DVVHVPHQW GDWD WR PRRUWVWLYHGXRPDDV 6WUDWHJ\ V ([SHFWHG 5HVXOW ,PSDFW)MYLHZ WHDFKHUV ZLOO EH DEOH WR RRF XV)RE VSHFXH 6WDII 5HVSQRVLEOHFHIDFKRQLW, &VLODGPLQ			
6WUDWHJ\ 'HWDLOV	5HYLHZV		
6WUDW)HLOAFK ZLOO XVH VXPPDWLYH DQG IRUPDWLYH DVVHVPHQW GDWD WR PRRUWVWLYHGXRPDDV 6WUDWHJ\ V ([SHFWHG 5HVXOW ,PSDFW)MYLHZ WHDFKHUV ZLOO EH DEOH WR RRF XV)RE VSHFXH 6WDII 5HVSQRVLEOHFHIDFKRQLW, &VLODGPLQ			
6WUDWHJ\ 'HWDLOV	5HYLHZV		
6WUDW)HLOAFK ZLOO XVH VXPPDWLYH WHDP ZLOO PRQLWRU DQG FRPPXQLFDWH DWWHQGDQFH SHUFHQWDJHV FRPPXQLW\ UHJXODUO\ 6WUDWHJ\ V ([SHFWHG 5HVXOW ,PSDFW			


6WUDWHJ\ 'HWDLOV

5HYLHZV

(YDOXDWLRQ 'D5M D X B Q U G H W W D I I V X U Y H \

6WUDWHJ\ 'HWDLOV	5HYLHZV		
6WUDW)H L Q F K Z L O O G H V L J Q D Q G L P S O H P H Q W D P H Q W R U D Q G P H Q W H H S U R J U D P) W R P D X I S Y H W P Q B Z			
6WUDWHJ\ V ([SHFWH, G F U H D X O H W U, P S D I Q W L R Q R I Q H Z V W D I I E \ S U R Y L G L Q J W H R Y F K H U H E X S S R U X H			
6W D I I 5 H V S R Q V L E O H \$ G R U Q B Q G W R H D Q K H U V			
1R 3URJUHV   \$FFRPSOLVKH  &RQWLQXH 0R  I\LVFRQWLQXH			

(YDOXDWLRQ 'DVM D FKR KU F/HWDII DQG VWDN HKROGHU VXUYH\V HYHQW DWWHQGDQFH

6WUDWHJ\ 'HWDLOV		5HYLHZV		
6WUDW)HLOFK ZLOO GHYHORS D FROODERUDWLYH OHVVRQ GHVLJQ SURFHVV	V VR)VR KID VWHLWH H XFPIDV			
6WUDWHJ\ V ([SHFWHGD BGN XCHY HPSDZLWO PHHW ZHHNO\ WR UHYLHZ DQ	G URYLVH)HEVVRQ XQH			
6WDII 5HVSQRVLEOH\$GRUQR,QLWRVULQJHUV				
6WUDWHJ\ 'HWDLOV		5HYLHZV		
6WUDW)HLOFK ZLOO SURYLGH RSSRUWXQLWLHV WR SDUHQWV VWDII VWXG	HQWYR UDQGRWRWHKXLP R/DW			
SURFHVV	1RY)HE -XQH			
6WUDWHJ\ V ([SHFWHGD BGN XCHY HPSDZLWO PHHW ZHHNO\ WR UHYLHZ DQ	NLQJ FRPPLWWIH 6+\$			
+LJK 6FKRRO				
6WDII 5HVSQRVLEOH\$GRUQRQLWRVULQJ				
 1R 3URJUHVV				

(YDOXDWLRQ 'D)WDFRQJEFHXV JUDGH OHYHO QHZVOHWWHUV 5HPLQG 6FKRRO 0HVVHQJHU





6WUDWHJ\ 'HWDLOV

5HYLHZV

6WUDW)HJAFK ZLOO VKDUH SRVLWLYH VWRULHV WKURXJK VRFLDO PHGLD DQG FDISXVWLOG6XPDGH
6WUDWHJ\ V ([SHFWHQF5HDXVHG,PSDFXQLW\ HQJDJHPHQW
6WDII 5HVSQRVLEOH\$GRUQRQ5LWROGQMHDFKHUV

1RY)HE

(YDOXDWLRQ 'DWDG \$R WUSXU/FKDV LQJ UHFRUGV

6WUDWHJ\ 'HWDLOV		5HYLHZV	
6WUDW)HJFK ZLOO DQDO\]H DOO H[SHQGLWXUHV IRU EXGJHW UHFRPPHQGD	DWLR)RUPDWLY	H6XPPDV	
6WUDWHJ\ V ([SHFWH)S H)GLOWXUHSDFWH DQDO\]HG WR GHWHUPLQH HIIH	HFW)RY	VWX)G	QW)RQW
6WDII 5HVSQRVLEOH)GRUQ)DQ)GWR)DLS)V VHFUHWDU\			
 1R 3URJUHVV  \$FFRPSOLVKH  &RQWLQXH 0R  I\LVFRQWLQXH			

(YDOXDWLRQ 'DWD 6RXUFHV

(YDOXDWLRQ 'D~~W~~ E P~~L~~R X~~U~~L R~~H~~Q VRI ZRUN RUGHU WLFNHWV IRU UHSDLU

6WUDWHJ\ 'HWDLOV

5HYLHZV

6WUDW)HJ\ AFK ZLOO LGHQWLI\ EXLOGLQJ V\ VWHPV WKDW DUH LQ QHHG RI UHSODFHPHQW
6WUDWHJ\ V ([SHFWHG 5HVXOW ,PSDFW